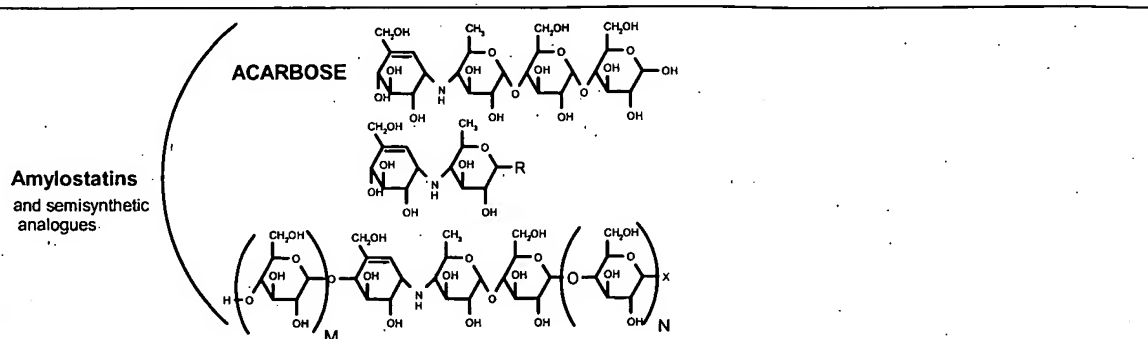
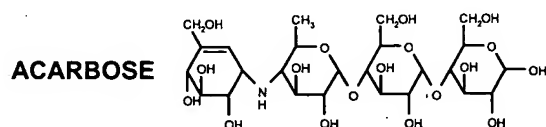


Please substitute pages 7-8 of the specification with the following "Clean Version"

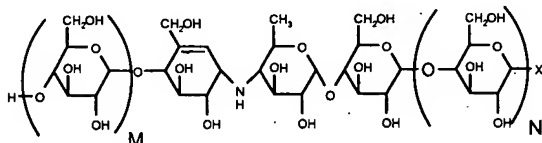
pages:



defined as "acarbose and higher homologues."\*



Compound disclosed specifically in DE-2347782. The following are homologues of acarbose:



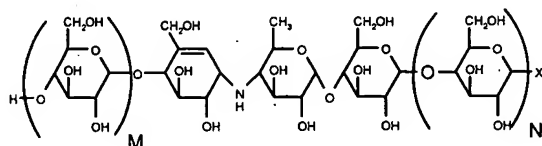
These specific compounds are disclosed in GB-1,482,543, wherein:

<u>X</u>	<u>M</u>	<u>N</u>	<u>GB-1,482,543 ref</u>
OH	0	0	Component II
OH	0	1	Component III
OH	0	2	Component IV
OH	0	3	Component V
OH	0	4	Component VI
OH	0	5	Component VII
OH	0	6	Component VIII

These specific compounds are disclosed in *Agric. Biol. Chem.*,46 (7), 1941-1945, 1982, wherein:

<u>X</u>	<u>M</u>	<u>N</u>	<u>Agr. Biol. Chem ref</u>
OH	0	0	Compound 1
OH	0	1	Compound 2
OH	0	2	Compound 3
OH	1	0	Compound 4
OH	1	1	Compound 5
OH	1	2	Compound 6

The following semi-synthetic acarbose analogues, generically and specifically disclosed in US-4,175,123



wherein M=0 to 8, and the sum of M+N is 0 to 7; X is OR, SH, SR, NH<sub>2</sub>, NHR, or NRR<sup>1</sup>, where R is alkyl, alkenyl, cycloalkyl, aralkyl, aryl or heterocyclyl wherein:

alkyl is preferably straight-chain or branched alkyl with 1 to 30, especially 1 to 18, carbon atoms (e.g. methyl, ethyl, n-propyl, i-propyl, n-butyl, t-butyl, n-hexyl, n-octyl, octyl-2, dodecyl, lauryl, cetyl and stearyl), wherein the alkyl radicals R can carry one or more, preferably 1 to 5, identical or different substituents (e.g., hydroxyl, or alkoxy, with preferably 1 to 4 carbon atoms, methoxy and ethoxy; amino or monoalkylamino and dialkylamino, with preferably 1 to 4 carbon atoms per alkyl radical, monomethylamino, monoethylamino, dimethylamino, and diethylamino; mercapto or alkylthio, with preferably 1 to 4 carbon atoms, methylthio and ethylthio; halogen (preferably fluorine, chlorine and bromine) ;alkylcarbonyl; with preferably 1 to 4 carbon atoms in the alkyl radical; and carboxyl, nitro, cyano, the aldehyde group and the sulphonic acid group;

alkenyl is preferably straight-chain or branched alkenyl with 2 to 6 carbon atoms, with optional substituents (e.g. hydroxyl, alkoxy with 1 to 4 carbon atoms, mercapto, alkylthio with 1 to 4 carbon atoms, halogen (preferably fluorine, chlorine and bromine) or nitro);

cycloalkyl, preferably a carbocyclic radical with 3 to 7 ring carbon atoms (preferably 5 to 7 ring carbon atoms), which can be substituted, (e.g. the groups and atoms mentioned above in the case of open-chain hydrocarbon radicals R);

aryl is preferably a monocyclic or bicyclic aromatic radical with 6 to 10 carbon atoms in the aryl part (e.g. phenyl, biphenyl, naphthyl, etc., in particular phenyl, which can be substituted), optionally substituted aryl or aralkyl radicals, preferably 1 to 3 identical or

different substituents (e.g. alkyl with 1 to 10 carbon atoms, optionally substituted, (e.g. chlorine, nitro or cyano); optionally substituted alkenyl radicals with 1 to 10 carbon atoms; hydroxyl or alkoxy with preferably 1 to 4 carbon atoms; amino or monoalkylamino and dialkylamino with preferably 1 to 4 carbon atoms per alkyl radical; mercapto or alkylthio with preferably 1 to 4 carbon atoms; and carboxyl or carbalkoxy with preferably 1 to 4 carbon atoms; the sulphonic acid group, alkylsulphonyl with preferably 1 to 4 carbon atoms and arylsulphonyl, preferably phenylsulphonyl; aminosulphonyl or alkylaminosulphonyl and dialkylaminosulphonyl with 1 to 4 carbon atoms per alkyl group, preferably methylaminosulphonyl and dimethylaminosulphonyl; nitro, cyano or the aldehyde group; alkylcarbonylamino with preferably 1 to 4 carbon atoms; and alkylcarbonyl with 1 to 4 carbon atoms, benzoyl, benzylcarbonyl and phenethylcarbonyl, the last-mentioned alkyl, phenyl, benzyl and phenethyl radicals may be optionally substituted (e.g. chlorine, nitro or hydroxyl, as well as radicals derived from sugars);

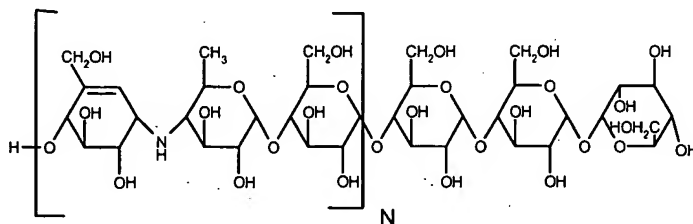
aralkyl preferably has 6 to 10, especially 6, carbon atoms in the aryl part said aryl part being preferably monocyclic or bicyclic carbocyclic aryl, such as phenyl, biphenyl or naphthyl, and preferably 1 to 4, especially 1 or 2, carbon atoms in the alkyl part, as for example in benzyl or phenylethyl. Possible substituents for the aryl part of the aralkyl radical are preferably those substituents mentioned for the aryl radicals R above;

Heterocyclyl preferably has a hetero-paraffinic, heteroaromatic or hetero-olefinic 5-membered or 6-membered ring, with preferably 1 to 3 identical or different hetero-atoms (e.g. oxygen, sulphur or nitrogen), optionally substituted (e.g. hydroxyl, amino, C<sub>1</sub>-C<sub>4</sub>-alkyl groups, benzene nuclei or further, preferably 6-membered, heterocyclic rings of the type mentioned can be fused to them, wherein the bonding of the heterocyclic radical R is effected via a carbon atom of the heterocyclic system or of the fused benzene nucleus (preferred heterocyclic radicals are derived, e.g., from furan, pyran, pyrrolidine, piperidine, pyrazole, imidazole, pyrimidine, pyridazine, pyrazine, triazine, pyrrole, pyridine, benzimidazole, quinoline, isoquinoline or purine, including those heterocycles which are bonded via a -CH<sub>2</sub>- bridge outside the ring, for example the furfuryl radical));

wherein R<sub>1</sub> of NRR<sup>1</sup>, is alkyl, cycloalkyl, aralkyl, or aryl in which R<sub>1</sub> preferably represents a straight-chain or branched alkyl radical with 1-6 carbon atoms or a cycloalkyl, aralkyl or aryl radical as defined above for R (e.g. cyclopentyl, cyclohexyl, benzyl or phenyl radical), it being possible for the radicals mentioned to be preferably substituted by alkoxy with 1 to 4 carbon atoms, amino, C<sub>1</sub>-C<sub>4</sub> monoalkylamino and C<sub>1</sub>-C<sub>4</sub>-dialkylamino, nitro, cyano, hydroxyl, mercapto, C<sub>1</sub>-C<sub>4</sub>-thioalkyl or the carboxyl or sulphonic acid group, in the case where R<sub>1</sub> denotes phenyl, also by C<sub>1</sub>-C<sub>4</sub>-alkyl;

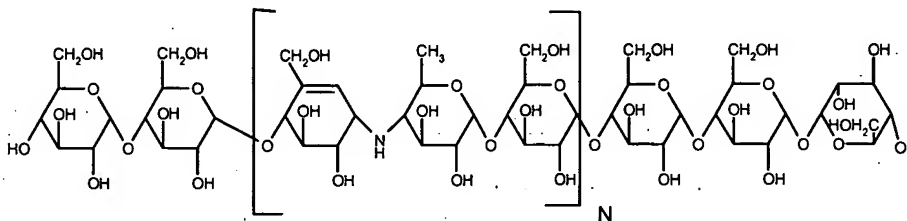
wherein R and R<sub>1</sub> and the nitrogen atom to which they are bonded, may optionally form a heterocyclic ring, optionally saturated or unsaturated, the ring optionally containing 1 to 3 further (preferably 1) oxygen atoms, sulphur atoms or nitrogen atoms and, as hetero groups, a SO<sub>2</sub> group or a N-alkyl group, the alkyl (e.g. methyl, ethyl, n- and i-propyl and n-, i- and t-butyl) in the N-alkyl group preferably containing 1-4, in particular 1 or 2, carbon atoms:

J. Antibiotics **36** p1157-1165 (1983) discloses the fermentation and isolation of a family of amylase inhibitors, trestatin-A, B and C. J. Antibiotics **36** p1166-1175 (1983) discloses the structures of trestatin-A, B and C



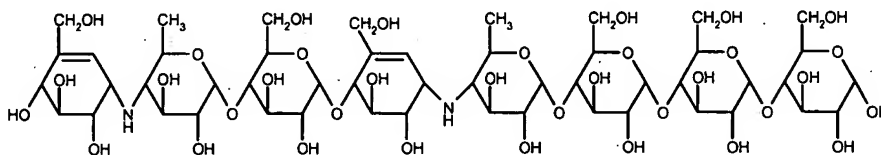
Trestatin A, N = 2  
Trestatin B N = 1  
Trestatin C N = 3

J. Antibiotics **37** p182-186 (1984) describes the isolation, characterisation and structure elucidation of higher homologues of the trestatins. The structures disclosed are:



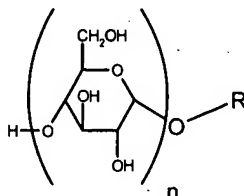
Ro 09-0766, N = 3  
Ro 09-0767, N = 2  
Ro 09-0768, N = 1

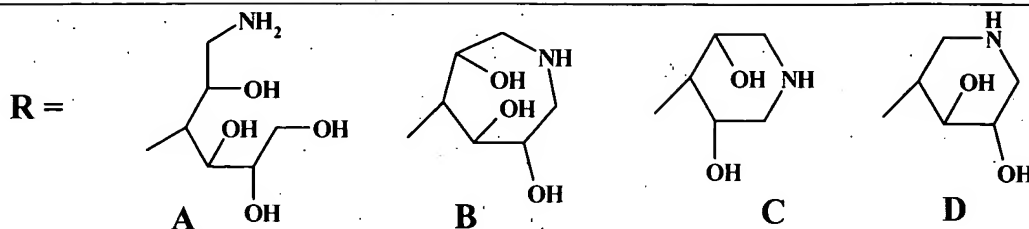
The amylase inhibitor, V-1532, is prepared and characterised as described in J.Mol. Biol. **260**, 409-421, (1996).



V-1532

Chem. Pharm. Bull **47**(2), 187-193 (1999) describes the synthesis of the following N-containing maltooligosaccharides with  $\alpha$ -amylase activity.



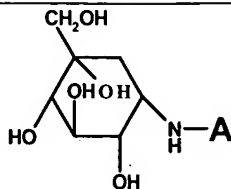


<b>R</b>	<b>n</b>	<u>Chem. Pharm Bull Ref. Number</u>
A	0	Compound 6
A	1	Compound 7
A	2	Compound 8
A	3	Compound 9
A	4	Compound 10
B	0	Compound 11
B	1	Compound 12
B	2	Compound 13
B	3	Compound 14
B	4	Compound 15
C	0	Compound 16
C	1	Compound 17
C	2	Compound 18
C	3	Compound 19
C	4	Compound 20
D	1	Compound 22
D	2	Compound 23
D	3	Compound 24

Agric. Biol. Chem, **41(11) 2221-2228 (1977)** describes the fermentation, recovery and isolation of the microbial natural product amylase inhibitor, SA-1. Although the structure of SA-1 is unknown, the compound has been shown to be homogeneous by tlc and is characterised by analytical data.

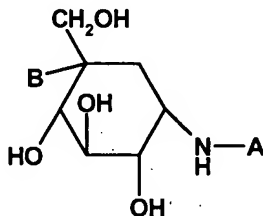
Kor. J. Mycol. **Vol 13, No.4, 203-212, (1985)** describes the fermentation and purification of a microbial natural product  $\alpha$ -amylase inhibitor from culture filtrates of *Streptomyces* strain DMC-72. The compound is characterised by analytical data.

**EP-194794 (WO-8605094 PCT equivalent)** reports the structures of a number of N-substituted valioline derivatives, referring to **EP-56194** for their synthesis. The compounds have the structure:



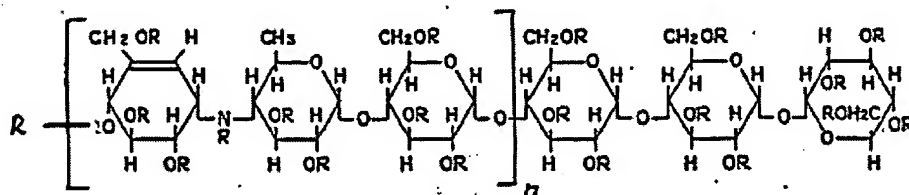
in which A is an acyclic hydrocarbon group of 1 to 10 carbon atoms which may have one or more members selected from the group consisting of hydroxy, phenoxy, thienyl, furyl, pyridyl, cyclohexyl, and a substituted or unsubstituted phenyl; a five- to six-membered cyclic hydrocarbon group which may have one or more members selected from the group consisting of hydroxy, hydroxymethyl, methyl and amino, or a saccharide residue.

**ES-8800955** describes valioline and validamine analogues with the structures:



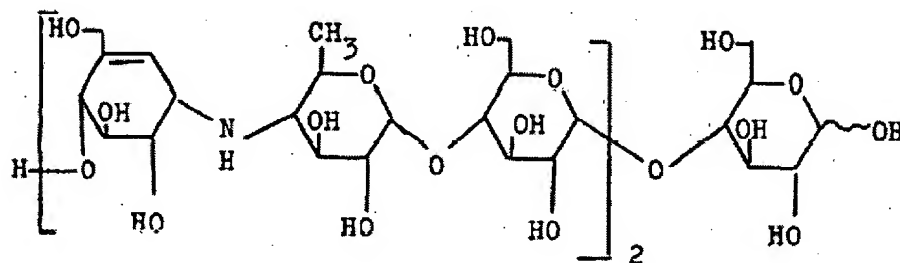
in which A is a hydrocarbon group of 1 to 10 carbon atoms, optionally substituted with hydroxy, phenoxy, thienyl, furyl, pyridyl, cyclohexyl; or a phenyl group optionally substituted; or a cyclic hydrocarbon of 3 – 7 carbon atoms, optionally substituted with hydroxyl, and B is hydrogen or hydroxyl.

**EP-301400** (US equivalent – **US-4885361**) describes the sulphation of the trestatins to give sulphated oligosaccharides with structures:

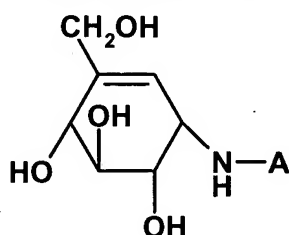


wherein n is a whole number from 1 – 3; R is hydrogen or a residue  $-\text{SO}_3\text{M}$  and M is a cation; and in which the degree of sulphation is at least 1.

**EP-173950** describes the fermentation, recovery and isolation of the pseudooligosaccharide  $\alpha$ -glycosidase inhibitor from *Streptomyces* sp. FH-1717 (DSM-3006). This compound has the structure shown:

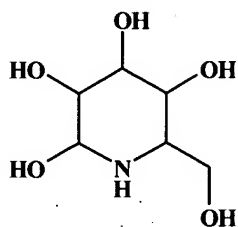


**EP-49981** discloses the synthesis of some N-substituted valienamine derivatives:

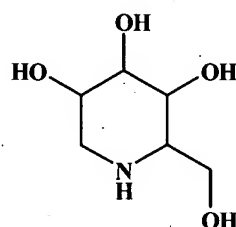


in which A is a chain hydrocarbon group having 1 to 10 carbon atoms optionally substituted by hydroxyl, phenoxy, thienyl, furyl, pyridyl, cyclohexyl or phenyl optionally substituted by hydroxyl, lower alkoxy, lower alkyl, halogen or carboxyl; or a cyclic hydrocarbon group having 3 to 7 carbon atoms optionally substituted by hydroxyl.

Angewandte Chemie Int. Ed. **20**, 744-761 (1981) reviews the chemistry of microbial derived  $\alpha$ -glucosidase inhibitors. The oligosaccharides are described elsewhere in this specification. The properties of the low molecular weight inhibitors, nojirimycin and 1-deoxynojirimycin, are reported.



**nojirimycin**



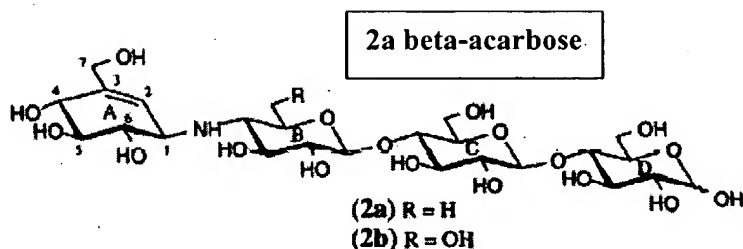
**1-deoxynojirimycin**

The fermentation, recovery, resin and HPLC purification, and nmr assignment of an

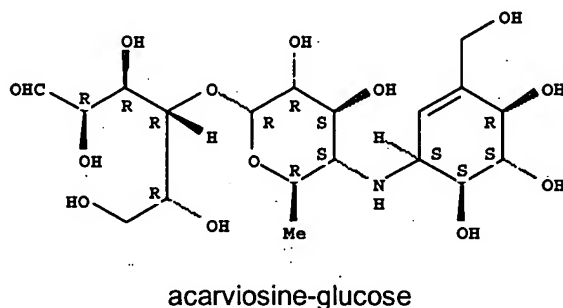
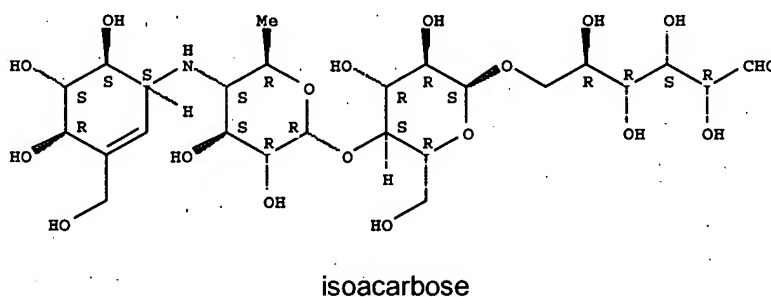
oligosaccharide amylase inhibitor from *Streptomyces conglobatus*, ATCC-31005 is described in Example 7 of the Experimental section of this specification.

The fermentation, recovery, resin and HPLC purification, and nmr assignment of a novel oligosaccharide amylase inhibitor from *Streptomyces conglobatus*, ATCC-31005 is described in Example 8 of the Experimental section of this specification.

Tetrahedron Letters, 37, 14, 2479-2482 (1996) describes the synthesis of  $\beta$ -acarbose from 1-epivalienamine.

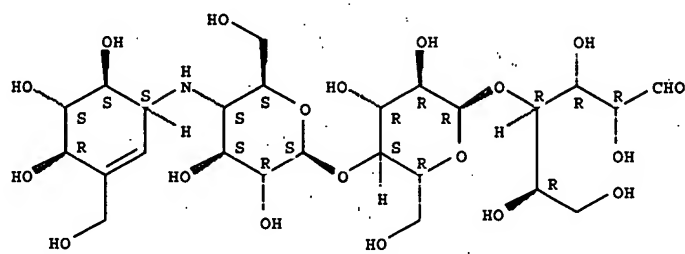


Both isoacarbose and acarviosine-glucose can be produced by the enzymic transformation of acarbose, as reported in Archives Biochem. Biophys, 371, 2, 277-283 (1999).



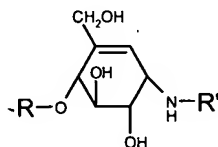
The synthesis of adiposin-2 is reported in JCS Chem. Comm., 9, 605-606 (1988)





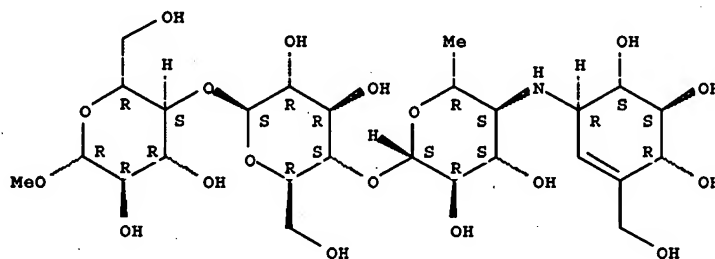
adiposin-2

Please substitute pages 10-19 with the following "Clean Version" pages:



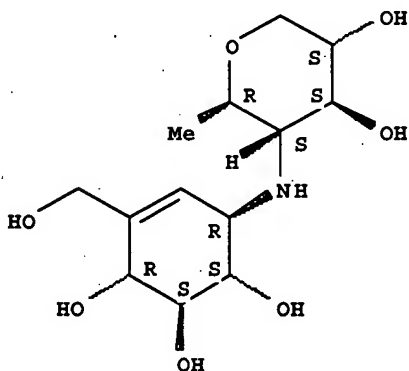
certain compounds with the moiety shown above appear in Chemical Abstracts\* with the Registry Numbers (RN) shown below.

RN 257941-10-9



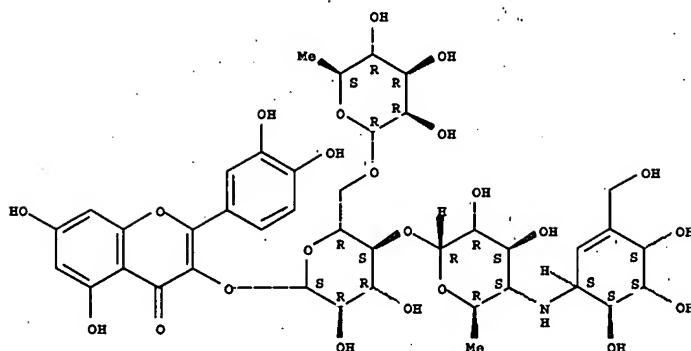
Stick, Robert V.; Tilbrook, D. Matthew G.; Williams, Spencer J. Australian Journal of Chemistry (1999), 52(9), 895-904. p896.

RN-257936-25-7



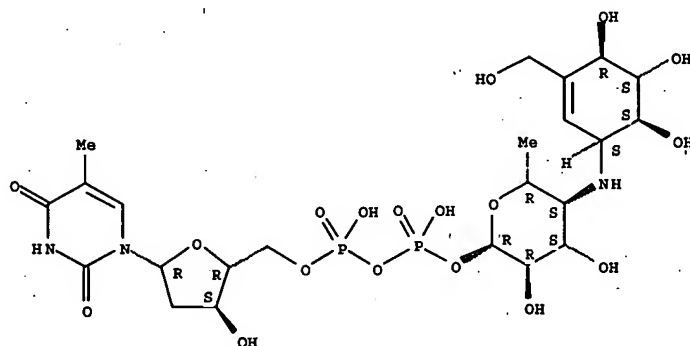
Stick, Robert V.; Tilbrook, D. Matthew G.; Williams, Spencer J. Australian Journal of Chemistry (1999), 52(9), 895-904 p896.

RN-250161-57-0



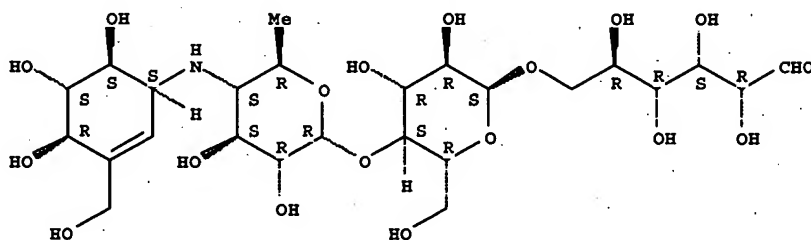
Crueger, Anneliese; Doerschug, Michael; Heiker, Fred-Robert; Von Hugo, Hasso;  
Rauenbusch, Erich. DE -19821038 -A1 p2.

RN-244195-46-8



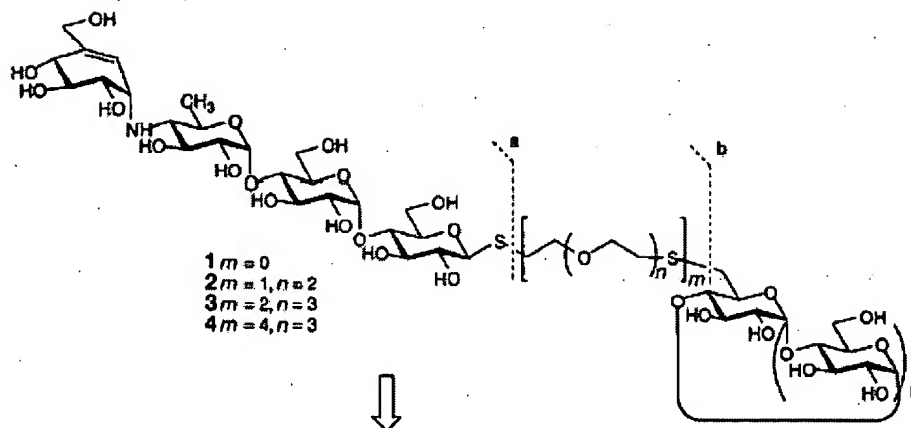
Mahmud, Taifo; Tornus, Ingo; Egelkrou, Erin; Wolf, Eckardt; Uy, Charmaine; Floss, Heinz  
G.; Lee, Sungsook. Journal of the American Chemical Society (1999), 121(30), 6973-  
6983.

RN-227087-68-5



Park, Kwan Hwa; Kim, Myo Jeong; Lee, Hee Seob; Han, Nam Soo; Kim, Doman; Robyt,  
John F. Carbohydrate Research (1998), 313(3-4), 235-246.

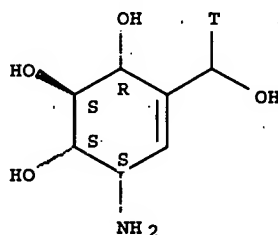
RN-223611-34-5



**compound 4**

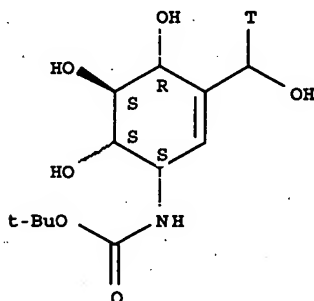
Payre, Nathalie; Cottaz, Sylvain; Boisset, Claire; Borsali, Redouane; Svensson, Birte; Henrissat, Bernard; Driguez, Hugues. *Angewandte Chemie, International Edition* (1999), 38(7), 974-977. p975.

RN-223608-57-9



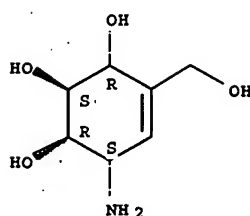
Lee, Sungsook; Tornus, Ingo; Dong, Haijun; Groger, Stefan. *Journal of Labelled Compounds & Radiopharmaceuticals* (1999), 42(4), 361-372 p363.

RN-223608-52-4



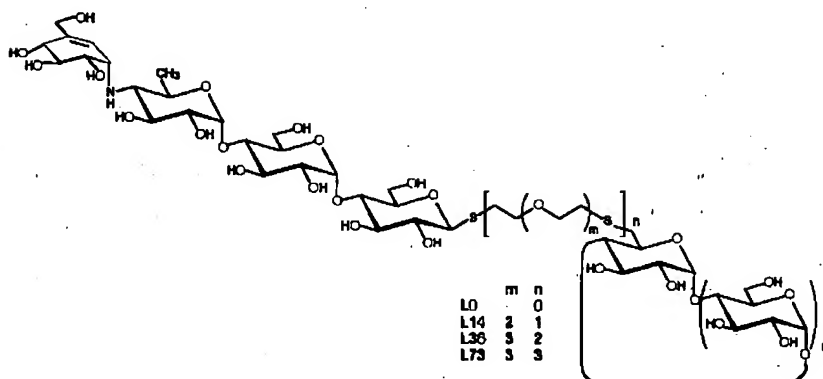
Lee, Sungsook; Tornus, Ingo; Dong, Haijun; Groger, Stefan. *Journal of Labelled Compounds & Radiopharmaceuticals* (1999), 42(4), 361-372 p363.

RN-221371-17-1



Shing, Tony K. M.; Li, Tin Y.; Kok, Stanton H.-L. Department of Chemistry, The Chinese University of Hong Kong, Shatin, Peop. Rep. China. Journal of Organic Chemistry (1999), 64(6), 1941-1946. compound 2 p1942.

RN-211247-54-0, 211247-56-2, 211247-57-3, 211247-58-4



LO = 211247-54-0

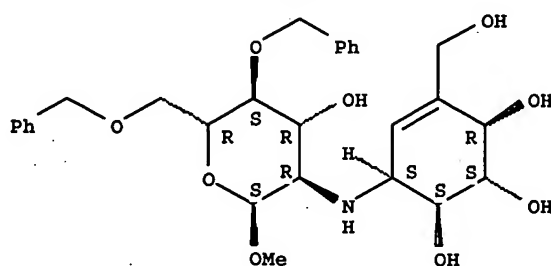
L14 = 211247-56-2

L36 = 211247-57-3

L73 = 211247-58-4

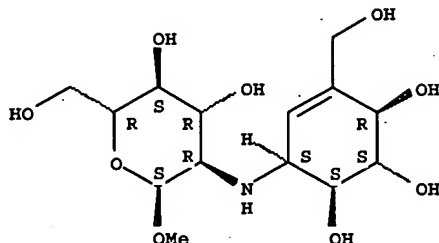
Sigurskjold, Bent W.; Christensen, Trine; Payre, Nathalie; Cottaz, Sylvain; Driguez, Hugues; Svensson, Birte. Biochemistry (1998), 37(29), 10446-10452. structure referenced on page 10448.

RN-211239-26-8



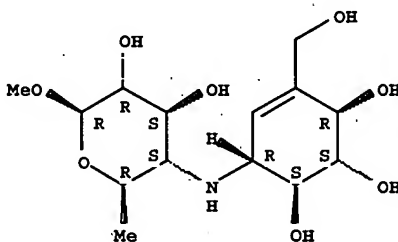
Ogawa, Seiichiro; Ashiura, Makoto; Uchida, Chikara. Carbohydrate Research (1998), 307(1,2), 83-95. compound 37 p88.

RN-211237-50-2



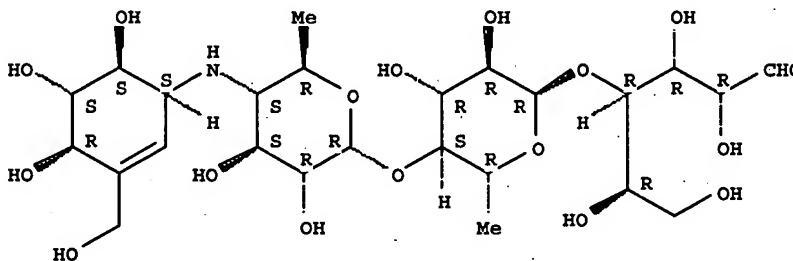
Ogawa, Seiichiro; Ashiura, Makoto; Uchida, Chikara. Carbohydrate Research (1998), 307(1,2), 83-95. compound 5 p88.

RN-207681-89-8



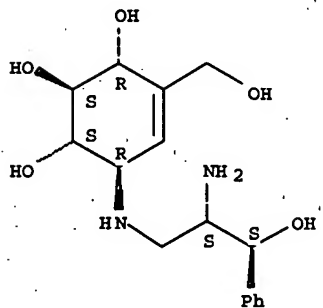
McAuliffe, Joseph C.; Stick, Robert V.; Matthew, D.; Tilbrook, G.; Watts, Andrew G.  
Department of Chemistry, The University of Western Australia, Nedlands, Australia.  
Australian Journal of Chemistry (1998), 51(2), 91-95. compound 3 p91.

RN-196944-81-7



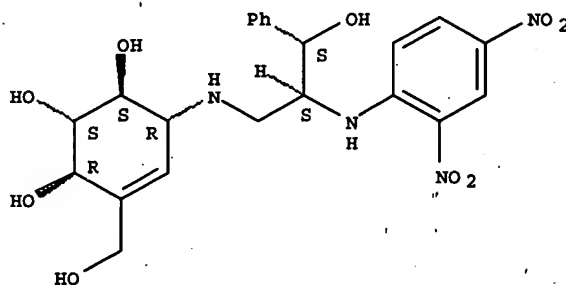
Crueger, Anneliese; Dellweg, Hans-Georg; Lenz, Juergen Georg; Schroeder, Werner; Pape, Hermann; Goeke, Klaus; Schaper, Beate; Hemker, Michael; Piepersberg, Wolfgang; Distler, Juergen; Stratmann, Ansgar. EP-796915-A2 p13.

RN-194539-38-3



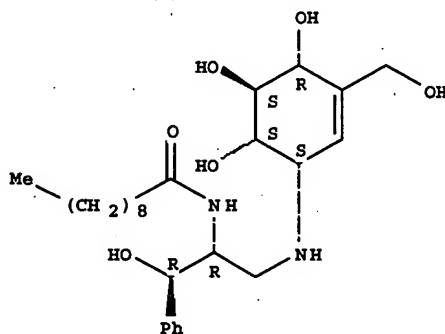
Ogawa, Seiichiro; Mito, Tamami; Taiji, Eiichi; Jimbo, Masayuki; Yamagishi, Kiwamu; Inokuchi, Jin-Ichi. Bioorganic & Medicinal Chemistry Letters (1997), 7(14), 1915-1920. compound 16b p1917.

RN-194539-37-2



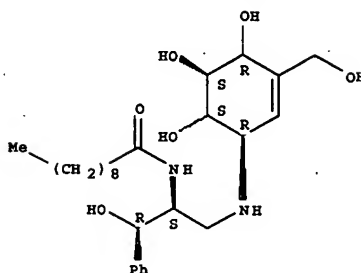
Ogawa, Seiichiro; Mito, Tamami; Taiji, Eiichi; Jimbo, Masayuki; Yamagishi, Kiwamu; Inokuchi, Jin-Ichi. Bioorganic & Medicinal Chemistry Letters (1997), 7(14), 1915-1920. compound 15b p1917.

RN-194539-27-0



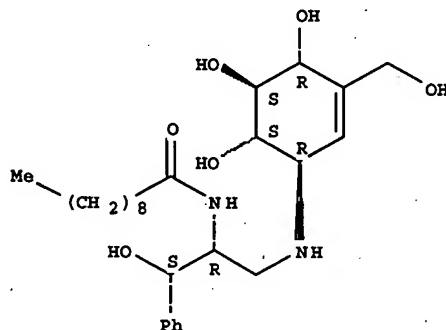
Ogawa, Seiichiro; Mito, Tamami; Taiji, Eiichi; Jimbo, Masayuki; Yamagishi, Kiwamu; Inokuchi, Jin-Ichi. Bioorganic & Medicinal Chemistry Letters (1997), 7(14), 1915-1920. compound 6a p1916.

RN-194539-17-8



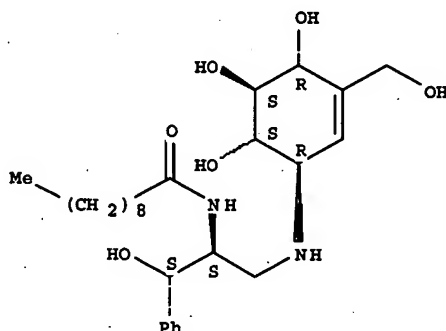
Ogawa, Seiichiro; Mito, Tamami; Taiji, Eiichi; Jimbo, Masayuki; Yamagishi, Kiwamu; Inokuchi, Jin-Ichi. Bioorganic & Medicinal Chemistry Letters (1997), 7(14), compound 4d p1916.

RN-194539-15-6



Ogawa, Seiichiro; Mito, Tamami; Taiji, Eiichi; Jimbo, Masayuki; Yamagishi, Kiwamu; Inokuchi, Jin-Ichi. Bioorganic & Medicinal Chemistry Letters (1997), 7(14), compound 4c p1916.

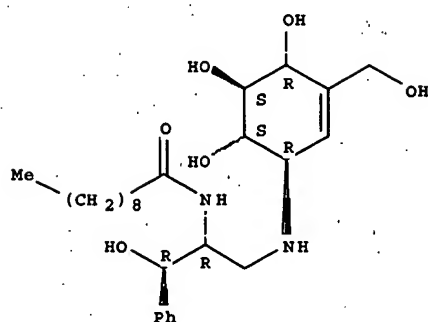
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Ogawa, Seiichiro; Mito, Tamami; Taiji, Eiichi; Jimbo, Masayuki; Yamagishi, Kiwamu; Inokuchi, Jin-Ichi. Bioorganic & Medicinal Chemistry Letters (1997), 7(14), compound 4b p1916.

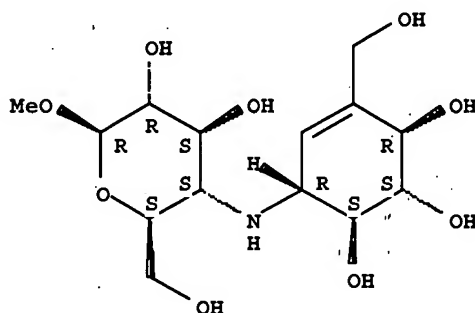


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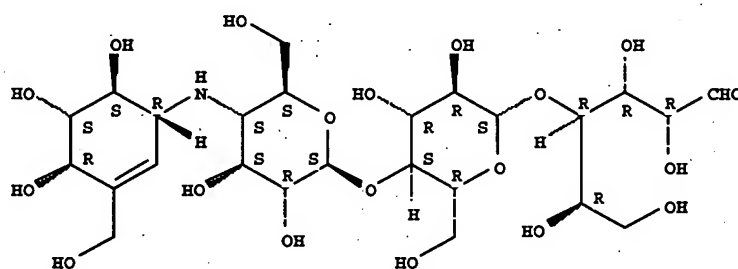
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RN-190784-97-5



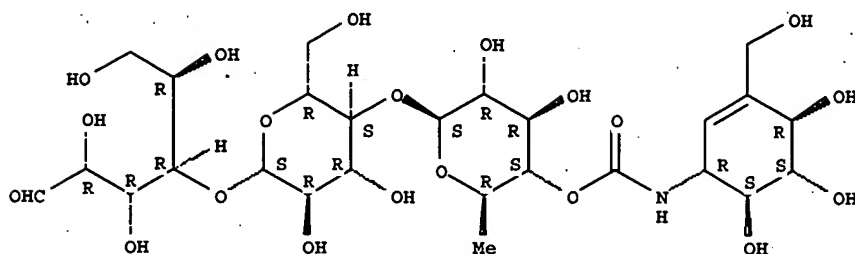
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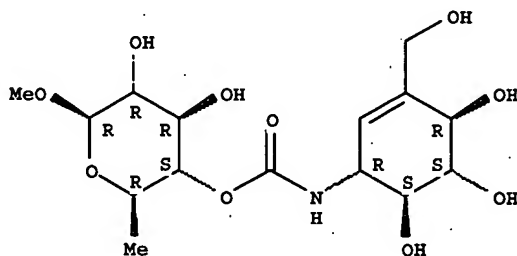
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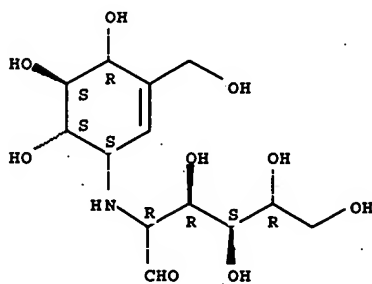
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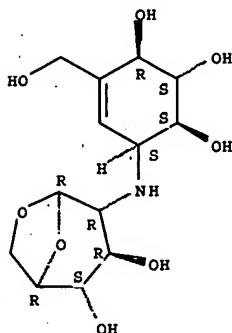
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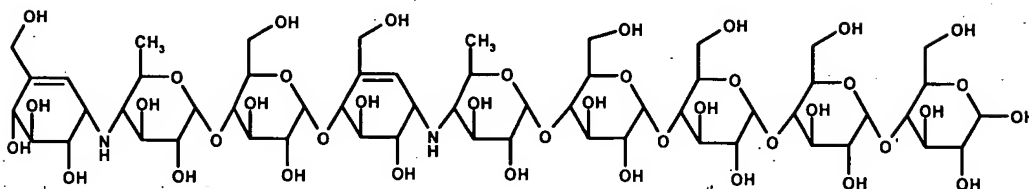
O. Srivastava and R. Sweda; US-5929037 example 45 column 30.

RN-186420-19-9



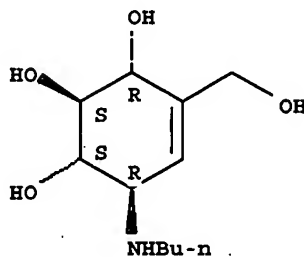
O. Srivastava and R. Sweda; US-5929037 example 44 column 29.

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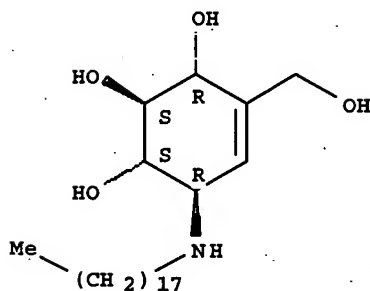
Banks et. al. EP-1157696-A2 p24.

RN-178034-25-8



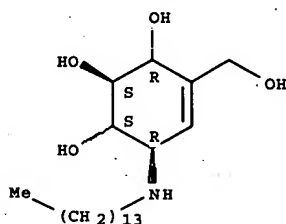
Ogawa, Seiichiro; Ashiura, Makoto; Uchida, Chikara; Watanabe, Shinsuke; Yamazaki, Chihiro; Yamagishi, Kimamu; Inokuchi, Jin-ichi. Bioorganic & Medicinal Chemistry Letters (1996), 6(8), 929-932 compound 3a p929.

RN-177898-45-2



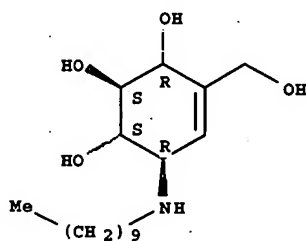
Ogawa, Seiichiro; Ashiura, Makoto; Uchida, Chikara; Watanabe, Shinsuke; Yamazaki, Chihiro; Yamagishi, Kimamu; Inokuchi, Jin-ichi. Bioorganic & Medicinal Chemistry Letters (1996), 6(8), 929-932 compound 3f p929.

RN-177898-44-1



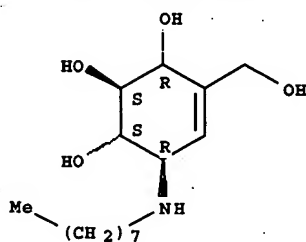
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RN-177898-43-0



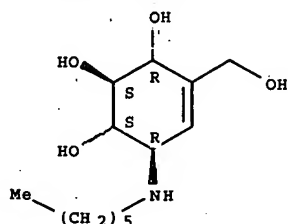
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RN-177898-42-9



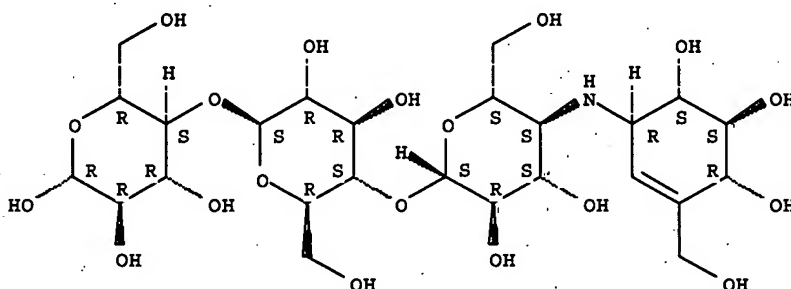
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RN-177898-41-8



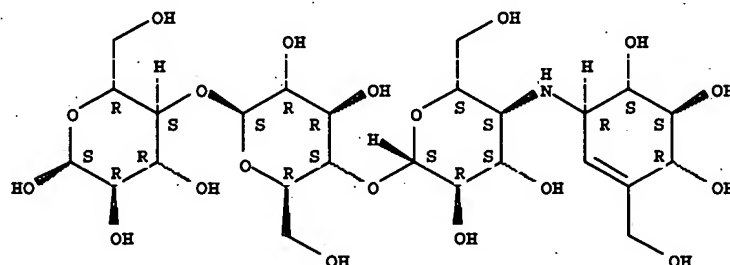
Ogawa, Seiichiro; Ashiura, Makoto; Uchida, Chikara; Watanabe, Shinsuke; Yamazaki, Chihiro; Yamagishi, Kimamu; Inokuchi, Jin-ichi. Bioorganic & Medicinal Chemistry Letters (1996), 6(8), 929-932 compound 3b p929.

RN-176587-86-3



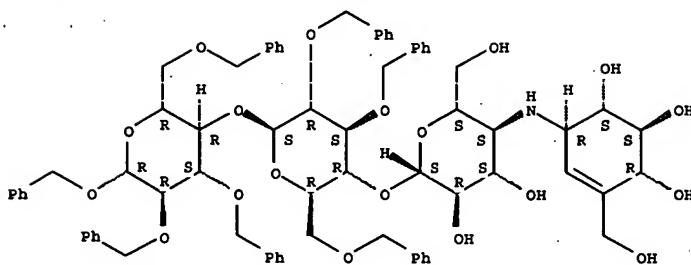
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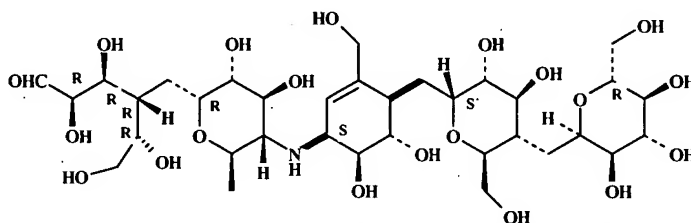
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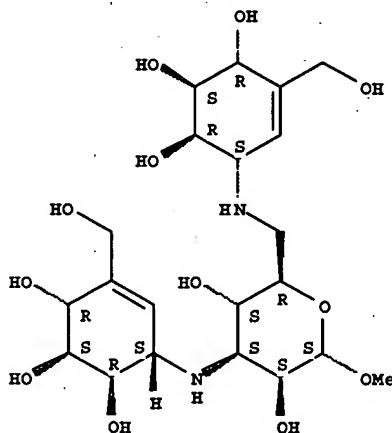
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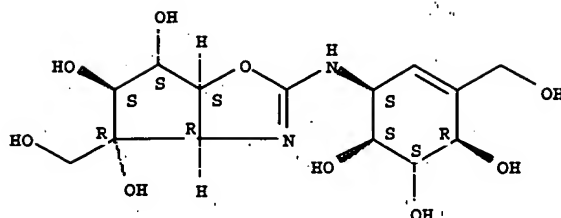
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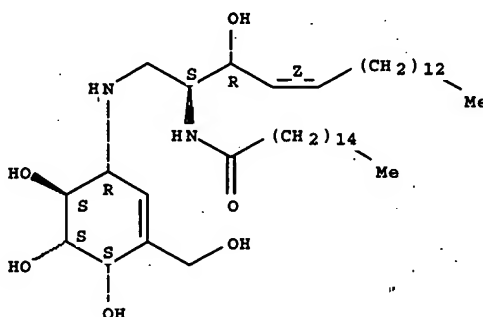
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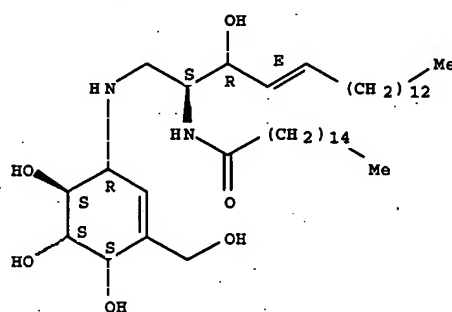
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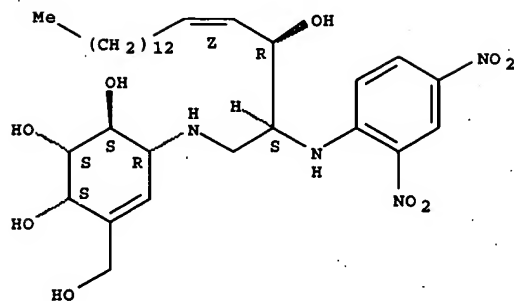
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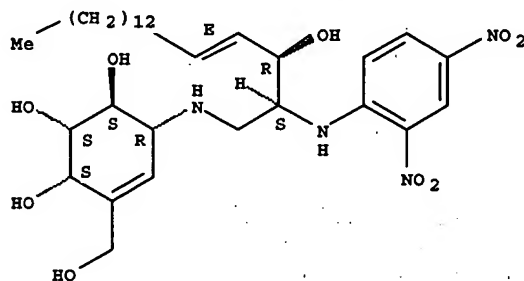
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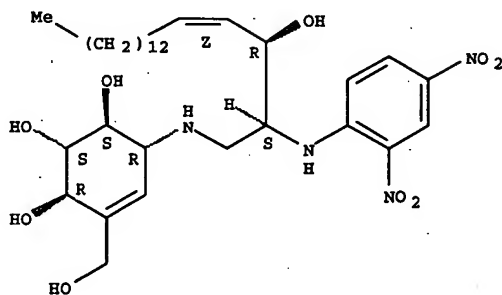
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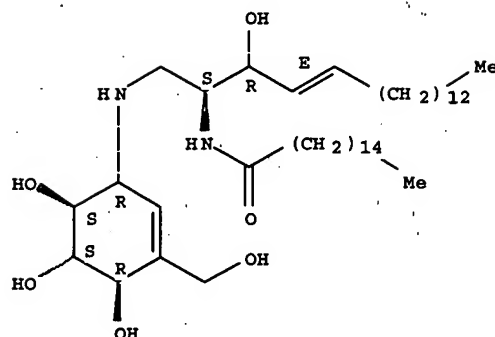
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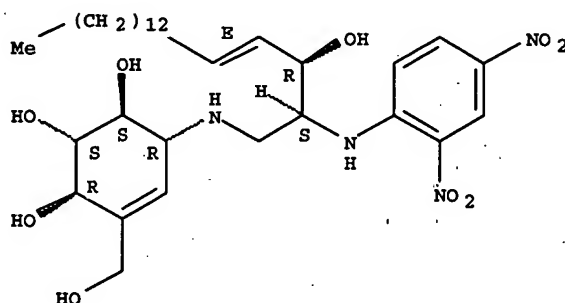


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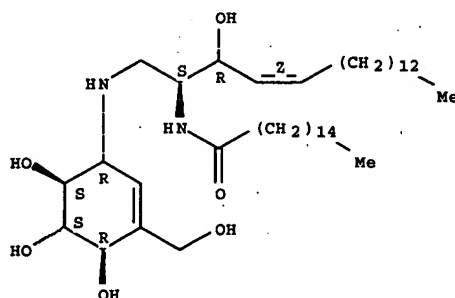
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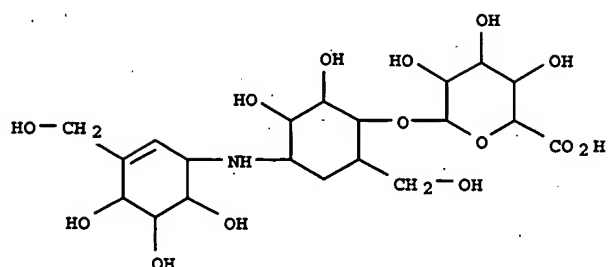
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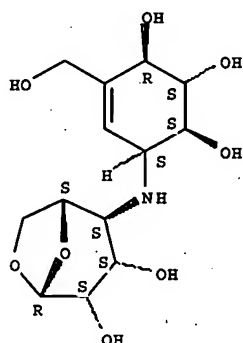
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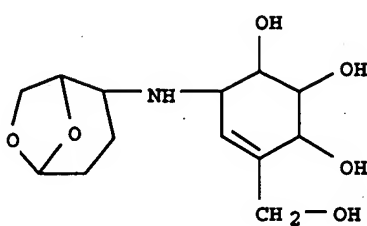
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p11 Table 4 row 6.

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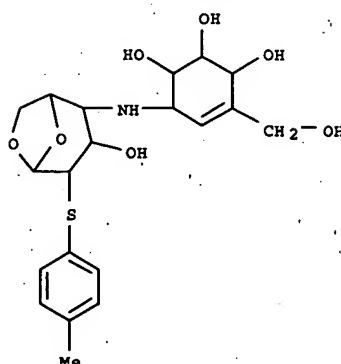
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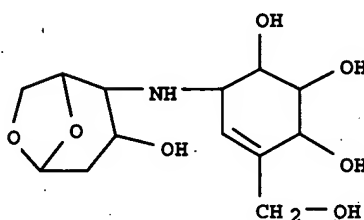
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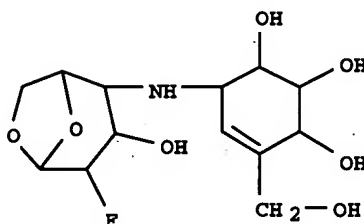
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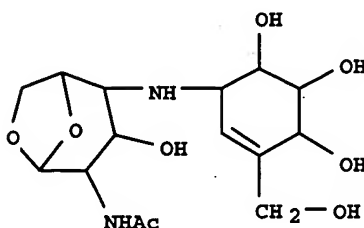
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compound 10 p178.

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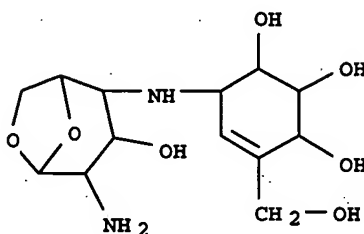
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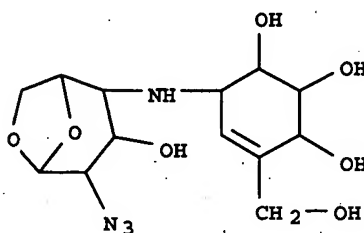
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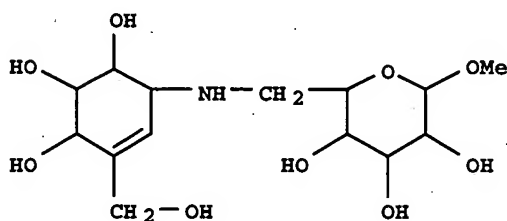
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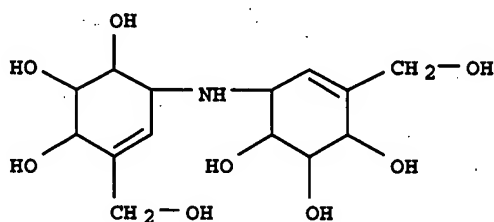
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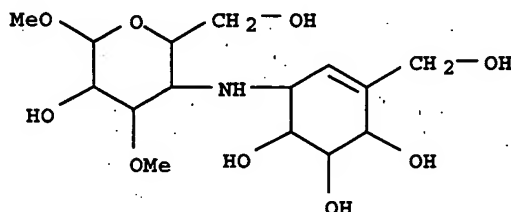
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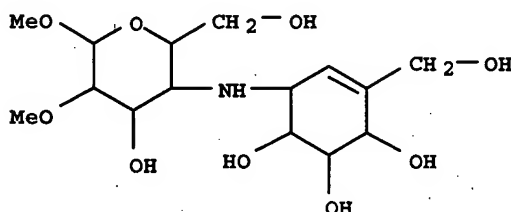
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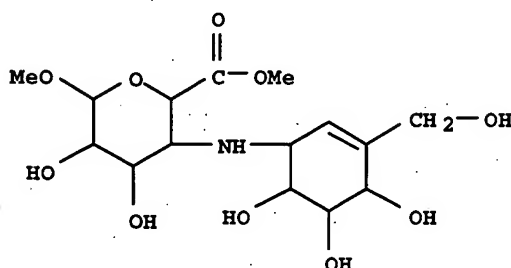
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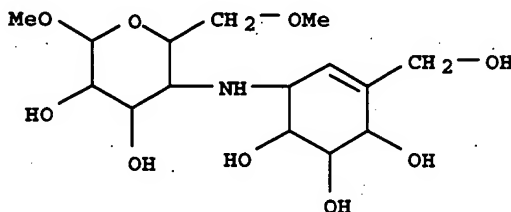
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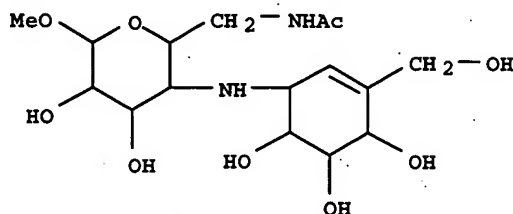
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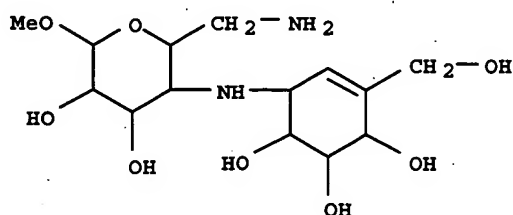
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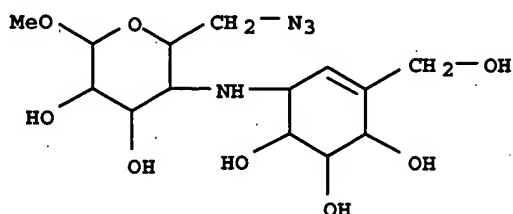
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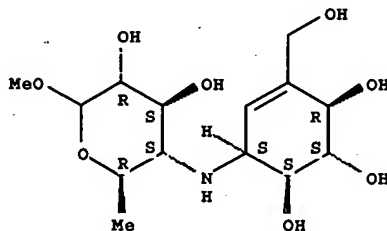
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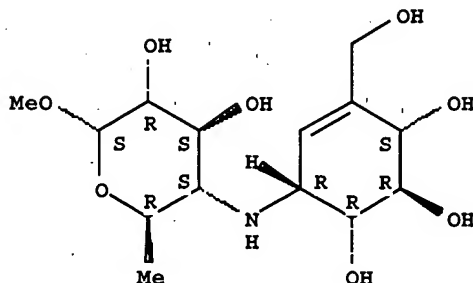
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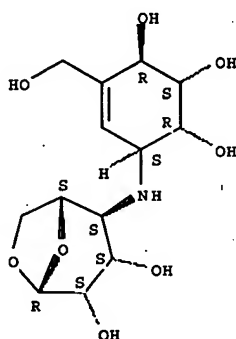
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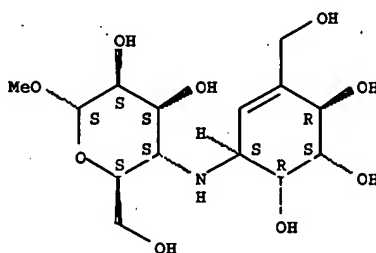
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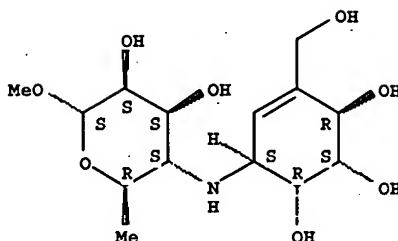
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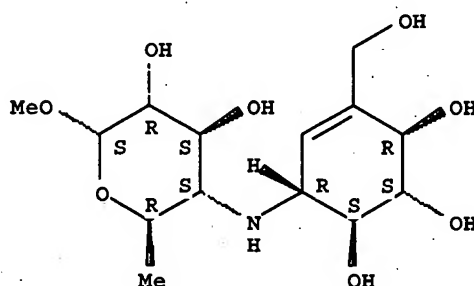
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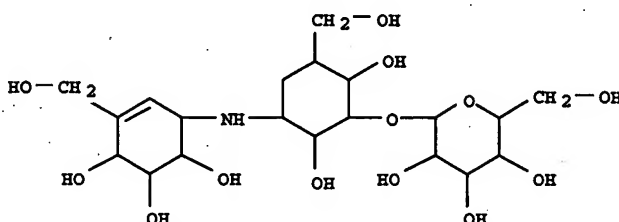
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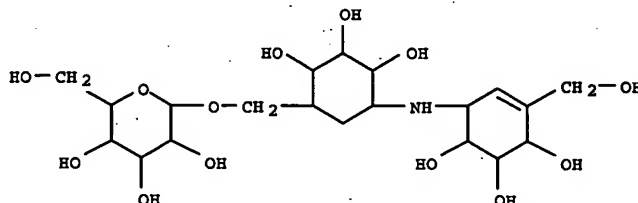
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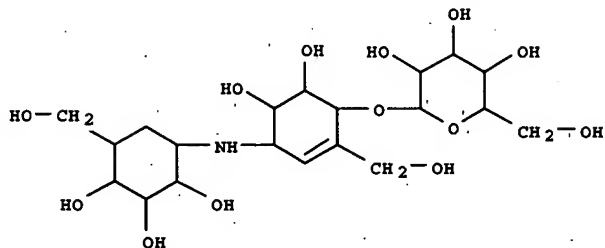
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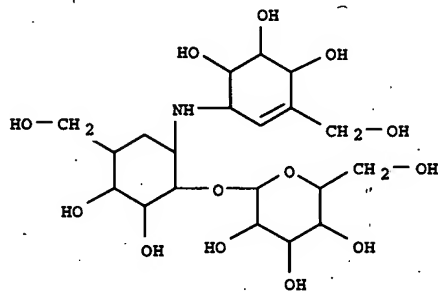
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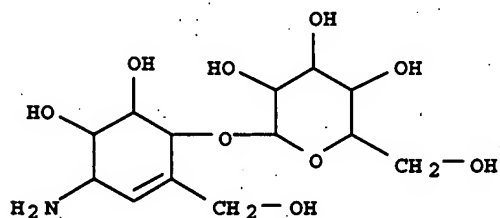
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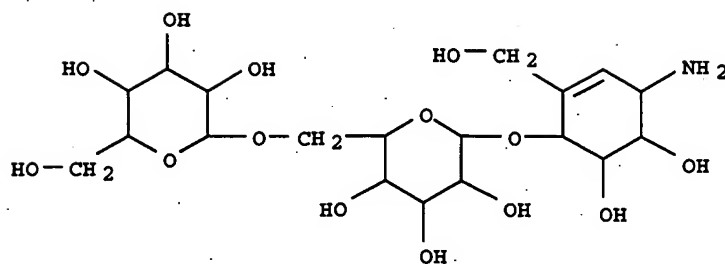
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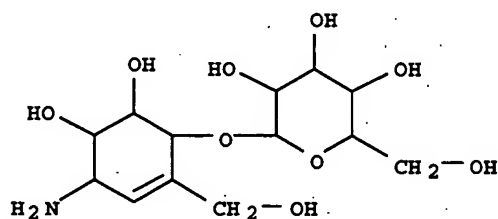
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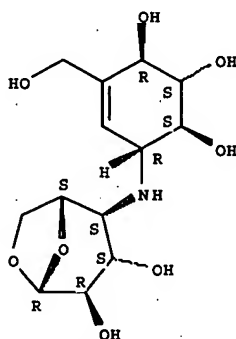
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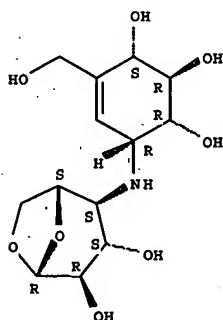
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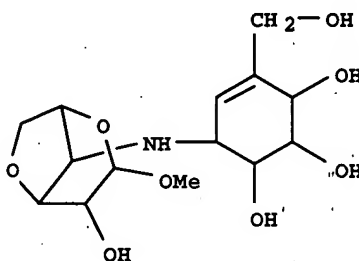
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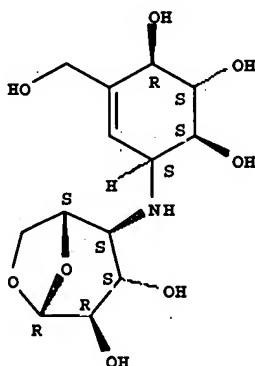
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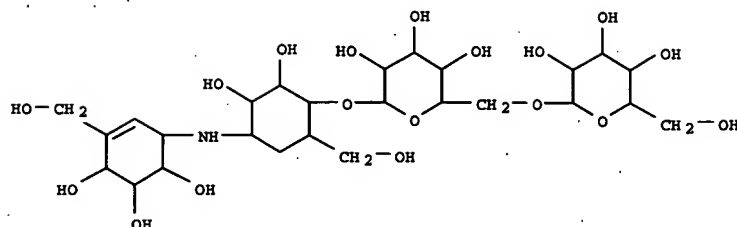
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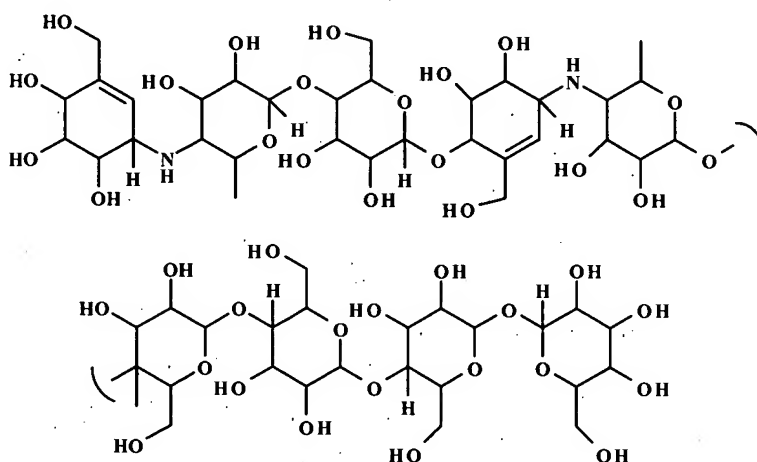
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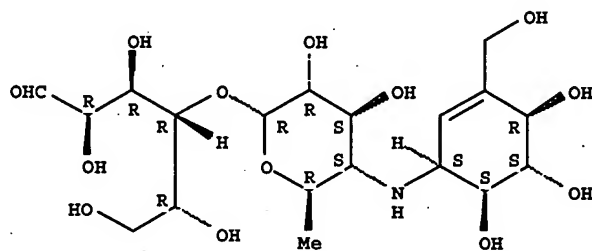
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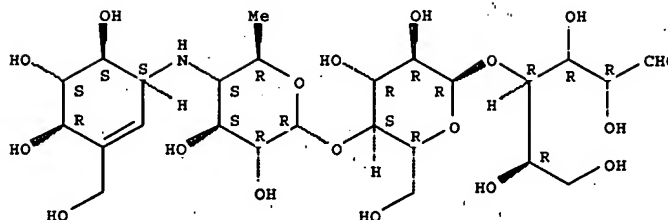
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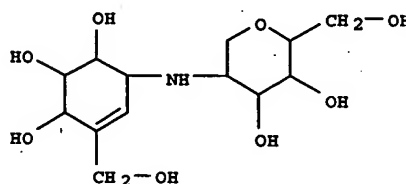
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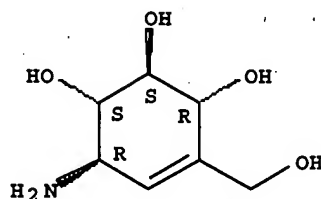
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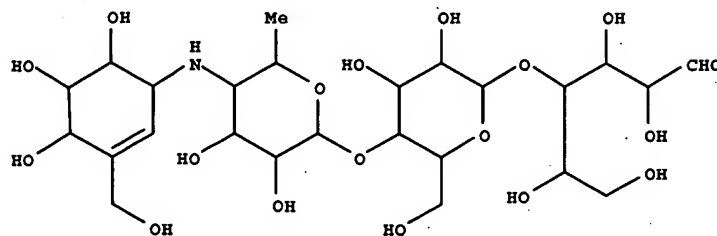
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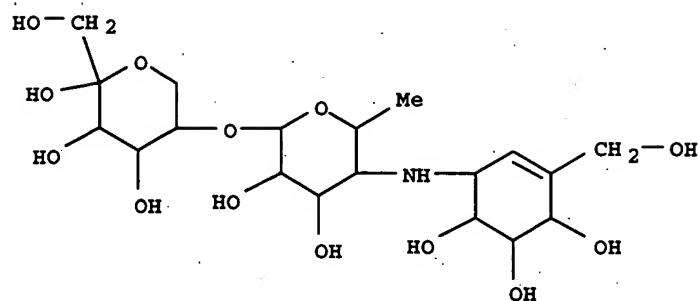
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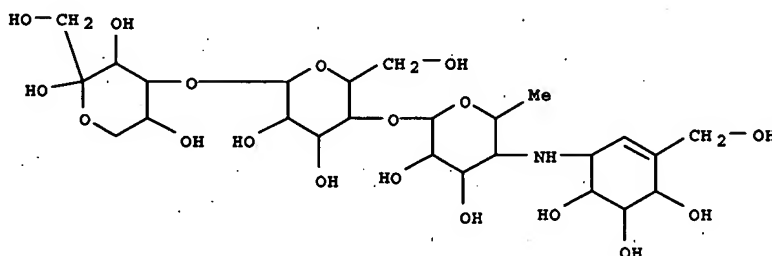
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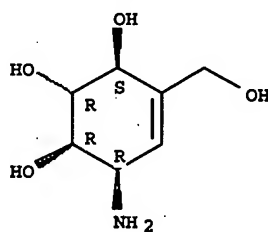
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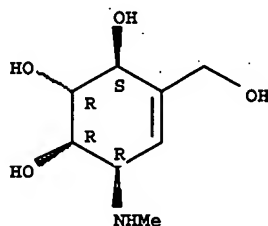
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RN-112067-63-7



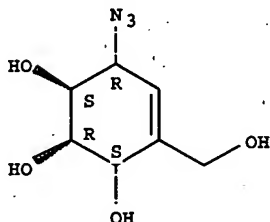
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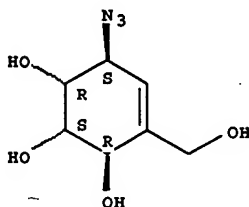
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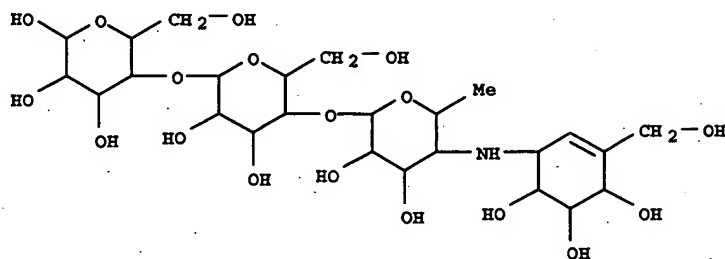
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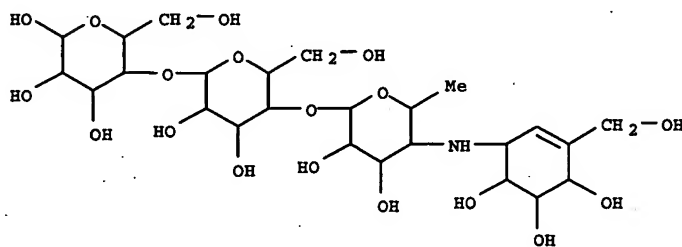
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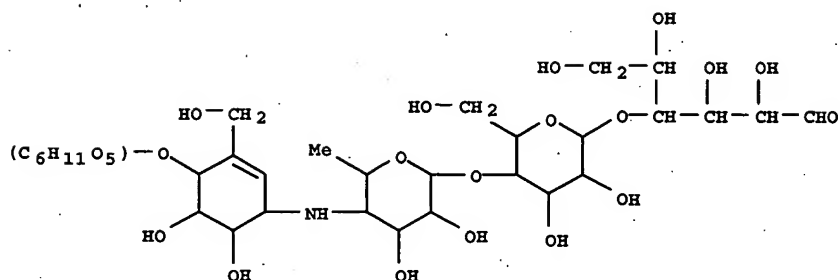
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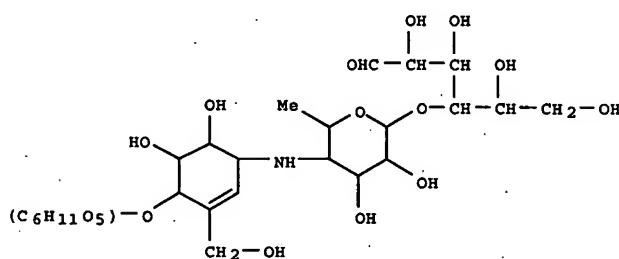
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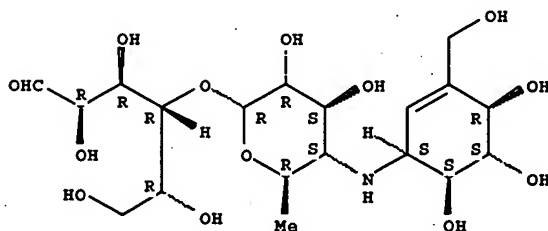
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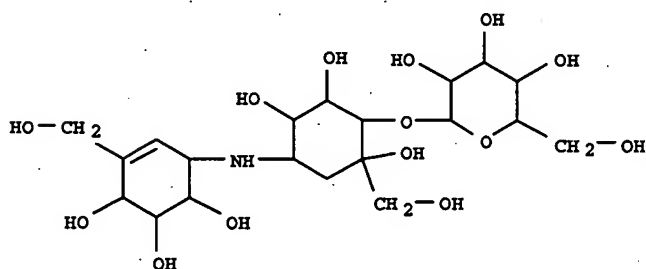
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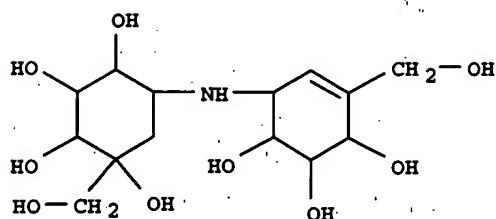
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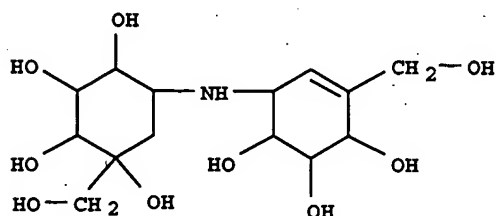


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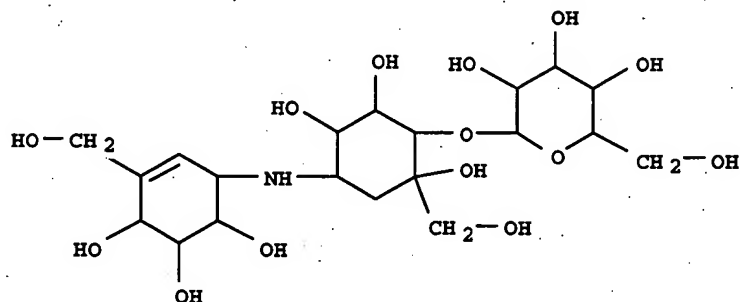
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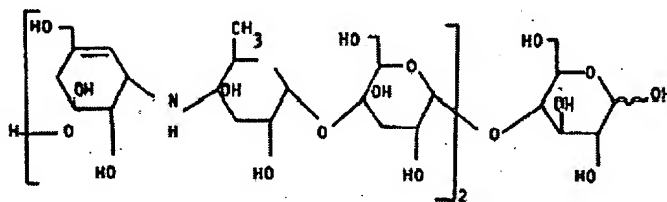
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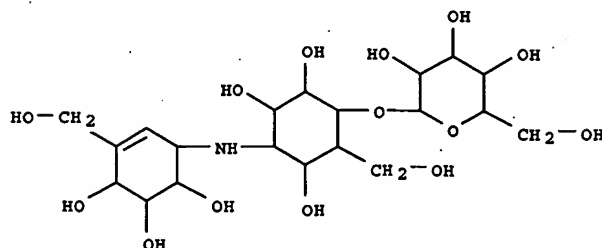
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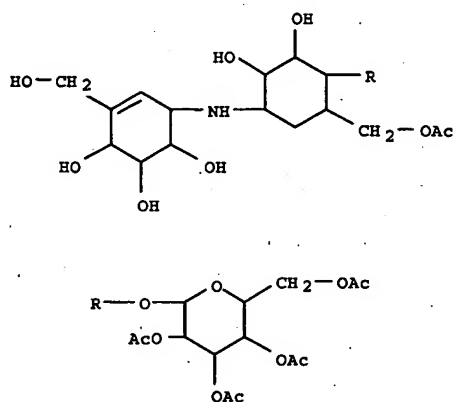
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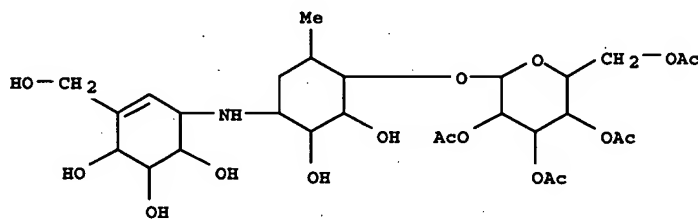
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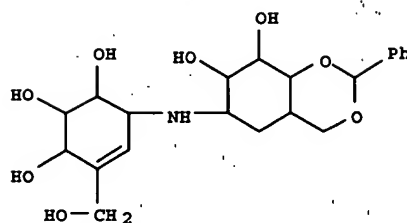
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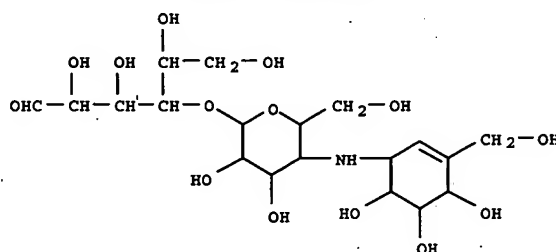
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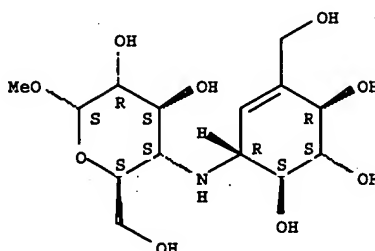
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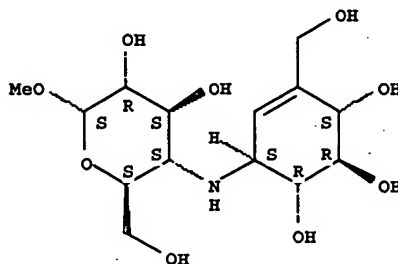
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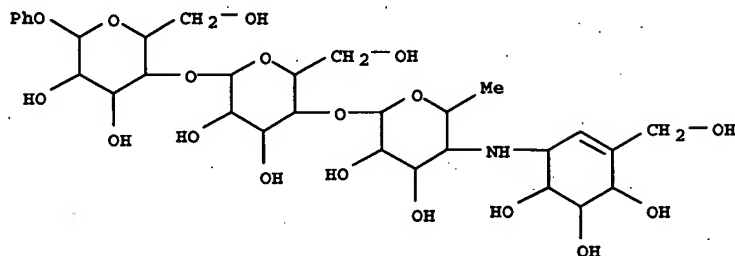
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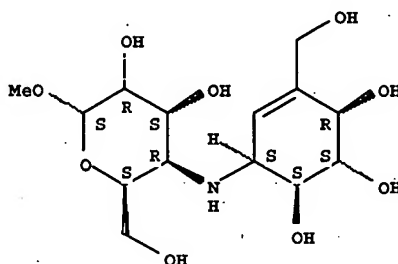
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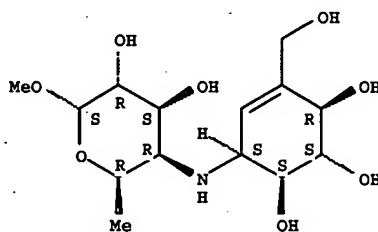
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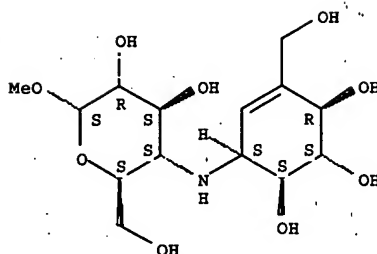
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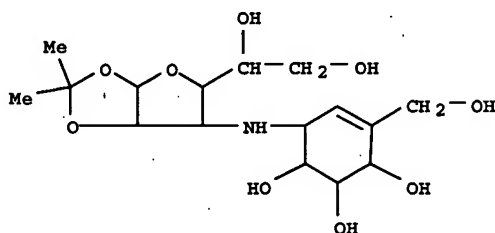
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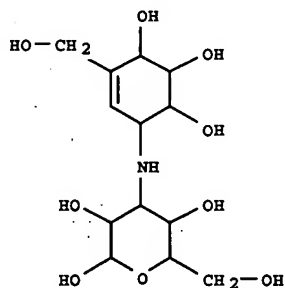
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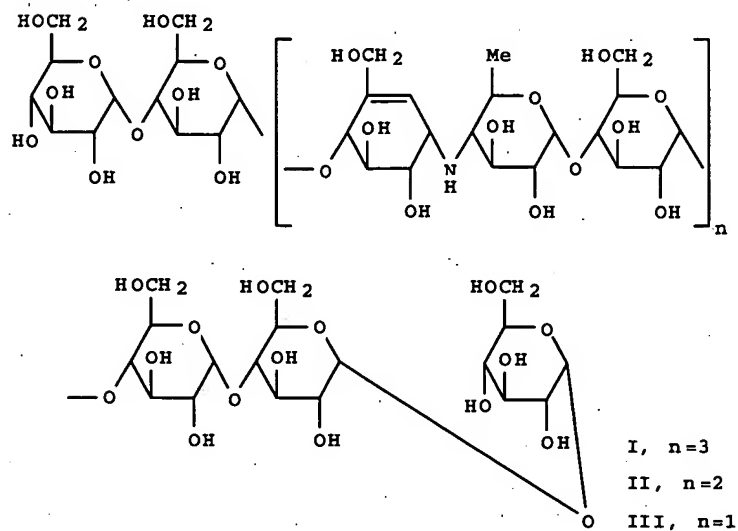
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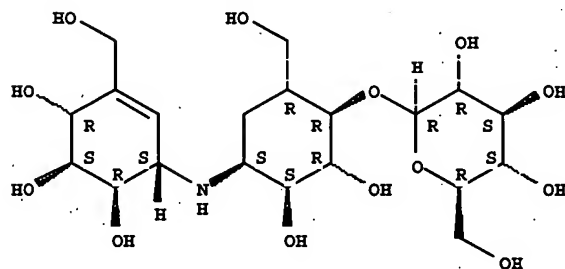
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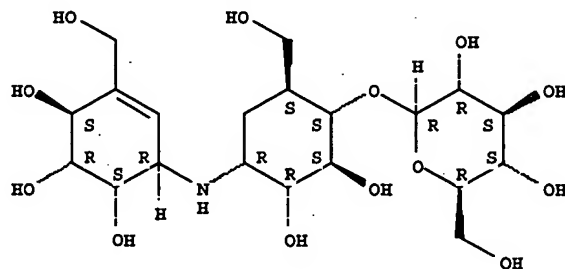
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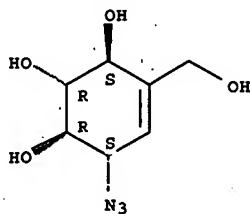
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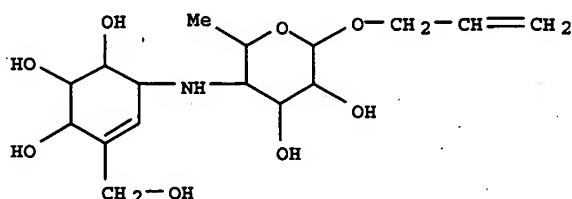
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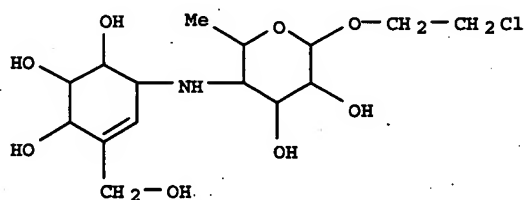
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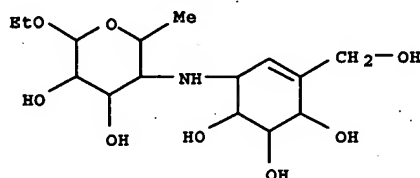
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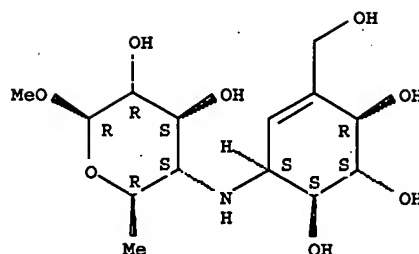
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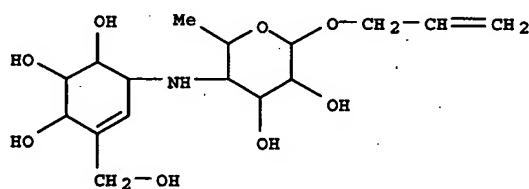
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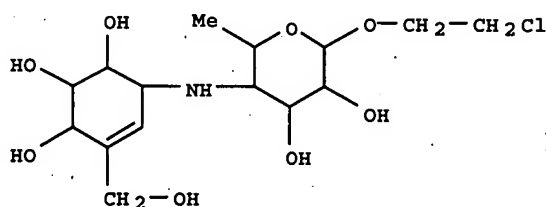
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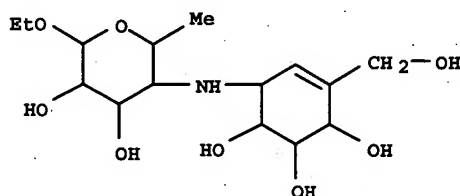
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Heiker, Fred Robert; Mueller, Lutz; Puls, Walter; Bischoff, Hilmar. EP-64635-A1.

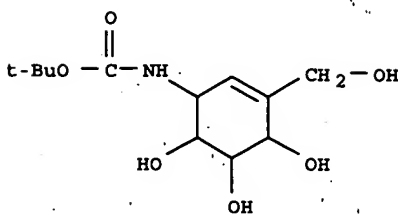
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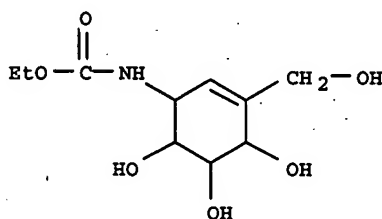


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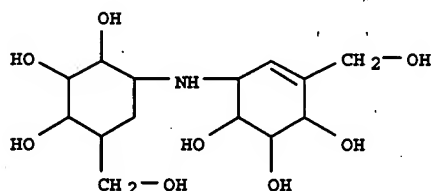
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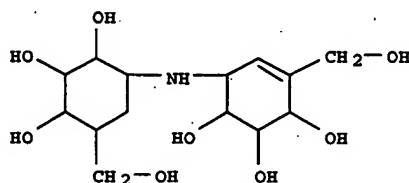
Horii, Satoshi; Kameda, Yukihiro; Fukase, Hiroshi. EP-89812-A1.

RN-84622-05-9

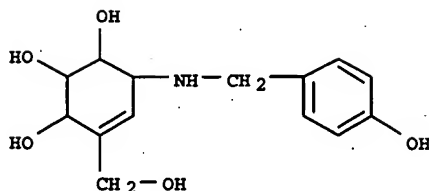


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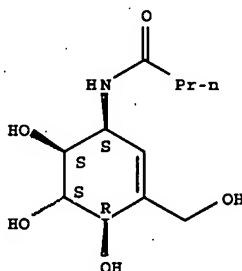
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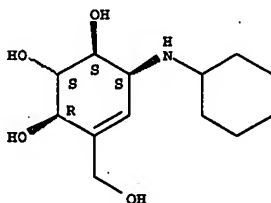
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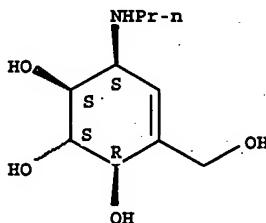
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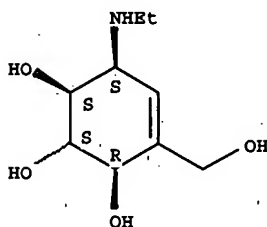


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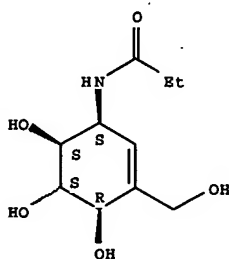
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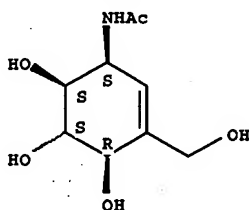
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Fukase, Hiroshi. Journal of Antibiotics (1982), 35(11), 1624-6.

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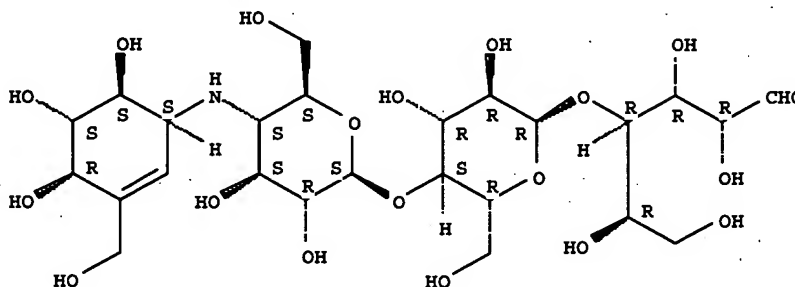
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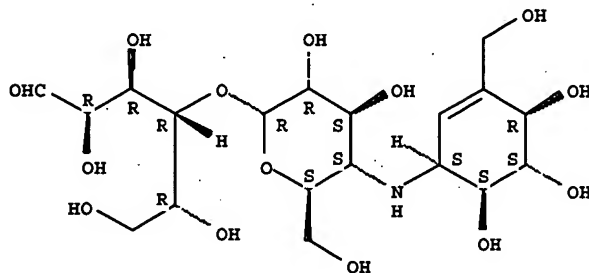
Kameda, Yukihiro; Asano, Naoki; Yoshikawa, Michio; Matsui, Katsuhiko; Horii, Satoshi;  
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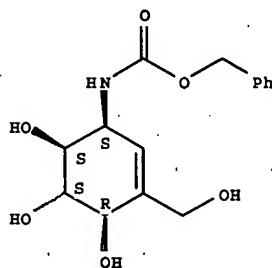
Kangouri, Kunio; Namiki, Shinjuro; Nagate, Takatoshi; Hara, Hiroshi; Sugita, Kazuhiko;  
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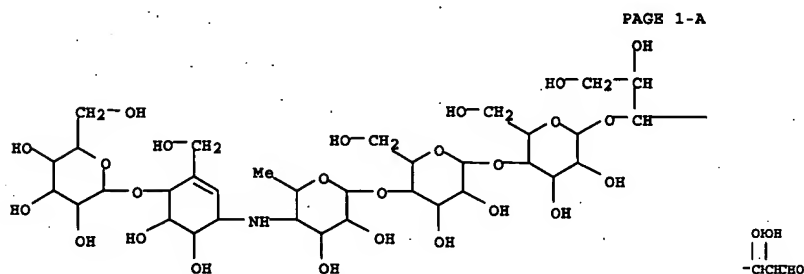
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RN-83470-76-2



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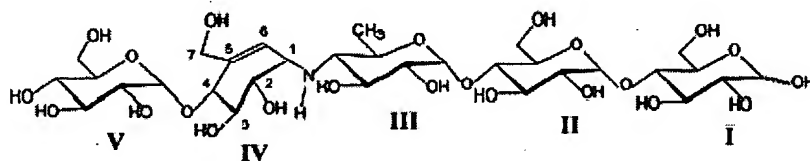


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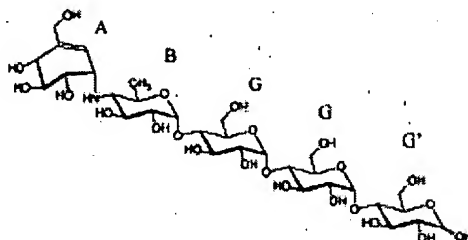
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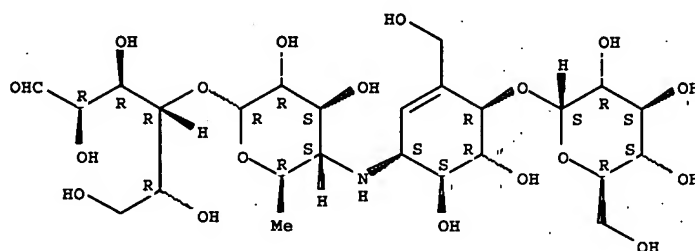
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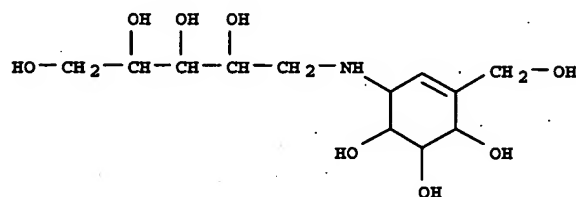
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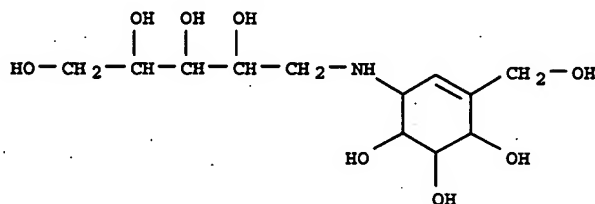
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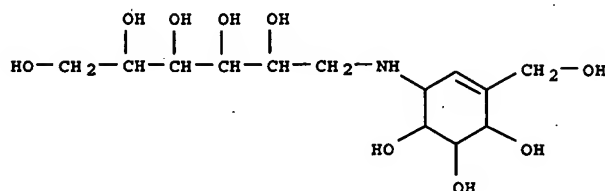
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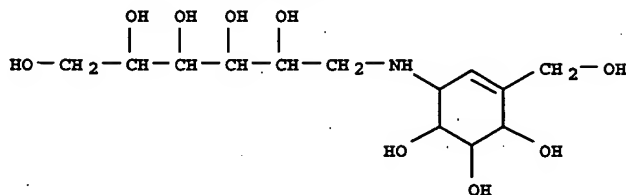
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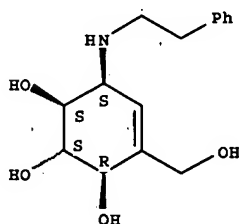
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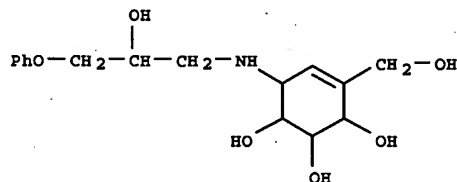
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• HCl

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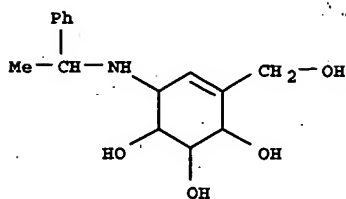
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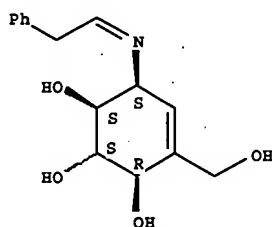
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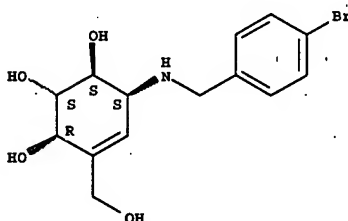
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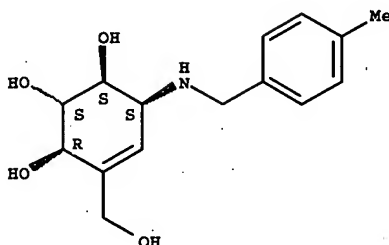
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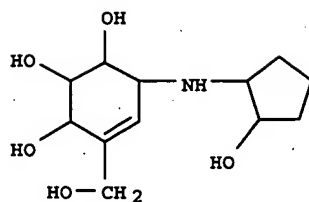
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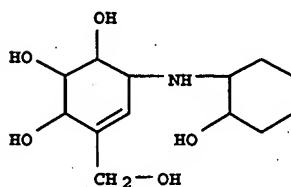
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RN-82920-53-4



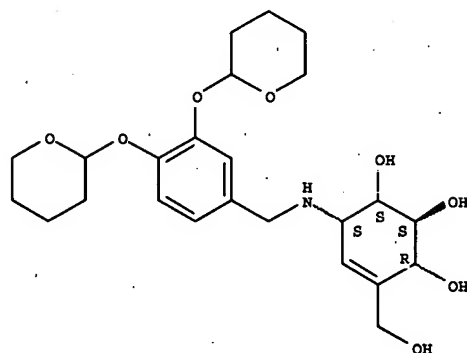
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RN-82920-52-3



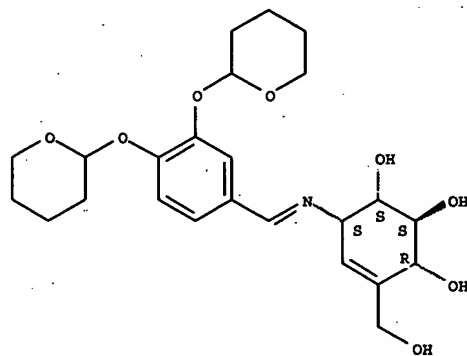
Horii, Satoshi; Kameda, Yukihiro; Fukase, Hiroshi. EP-49981-A1 p23.

RN-82920-51-2



Horii, Satoshi; Kameda, Yukihiro; Fukase, Hiroshi. EP-49981-A1 p23.

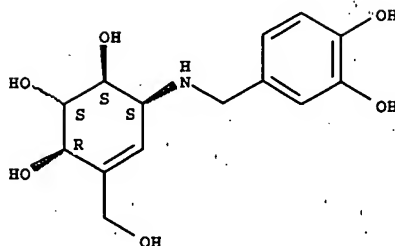
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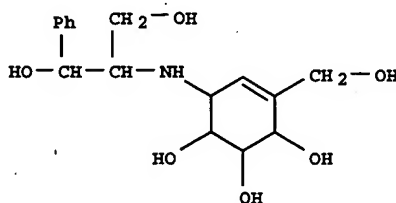


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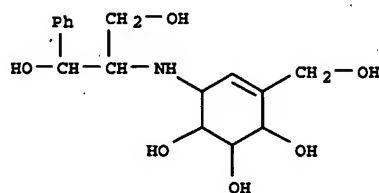
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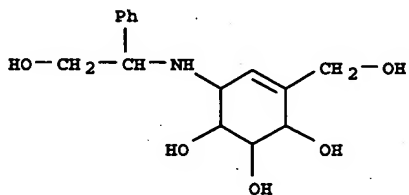
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RN-82920-47-6



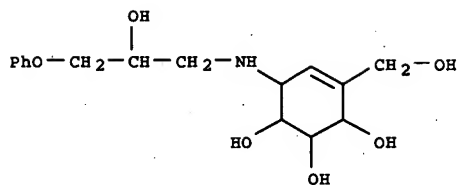
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RN-82920-46-5



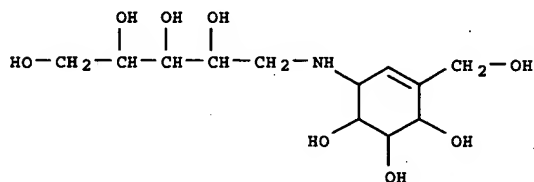
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RN-82920-45-4



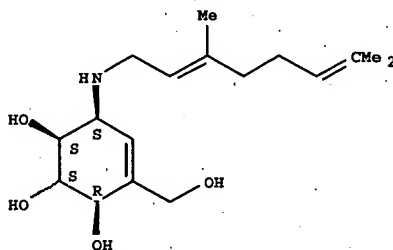
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RN-82920-44-3



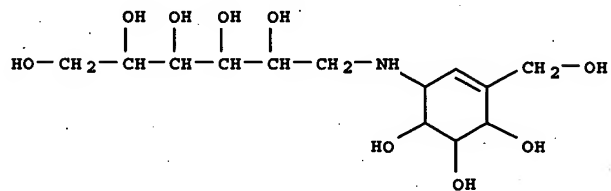
Horii, Satoshi; Kameda, Yukihiro; Fukase, Hiroshi. EP-49981-A1 p10

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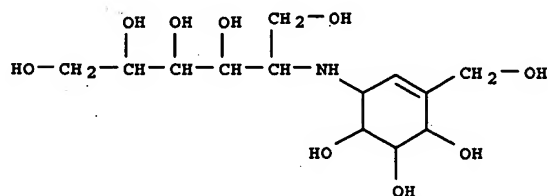
Horii, Satoshi; Kameda, Yukihiro; Fukase, Hiroshi. EP-49981-A1 p11

RN-82920-42-1



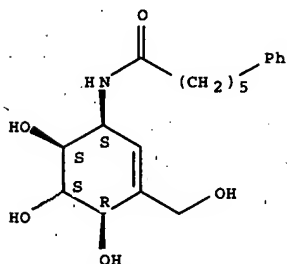
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RN-82920-41-0



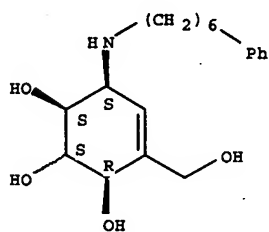
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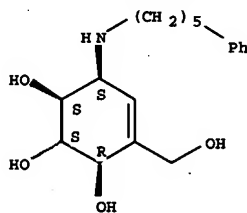
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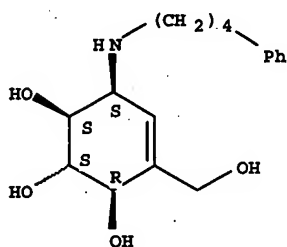
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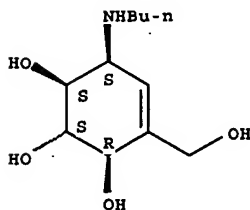


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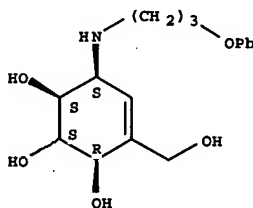
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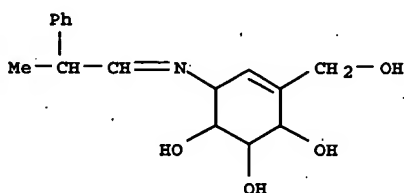
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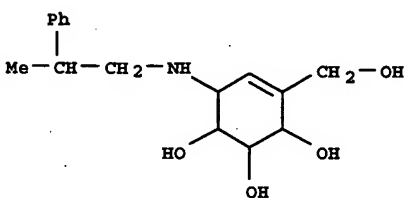
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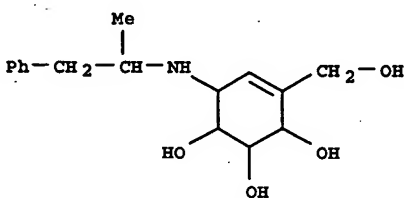
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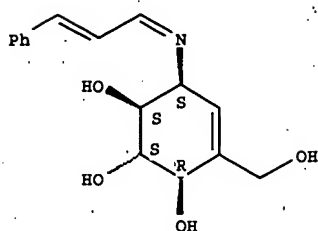
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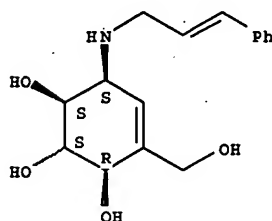
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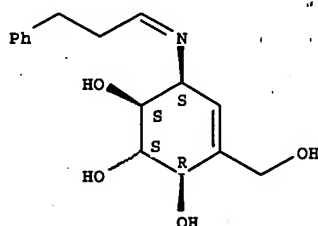
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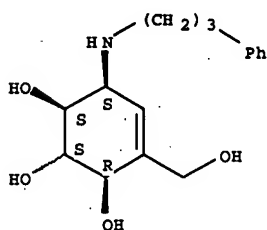
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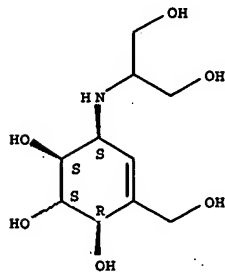


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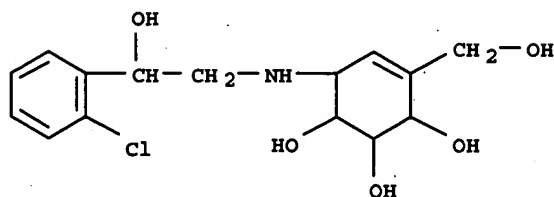
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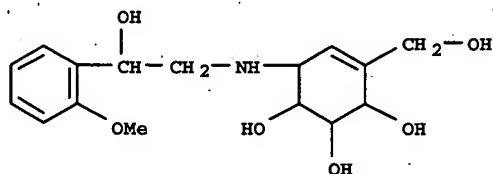
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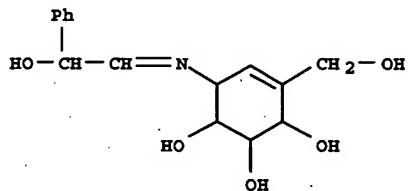
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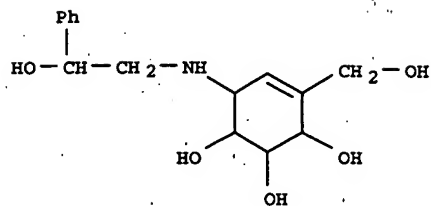
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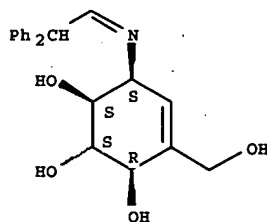
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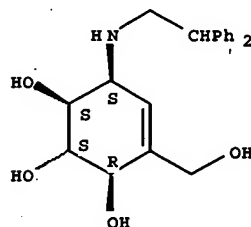
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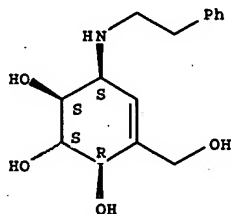
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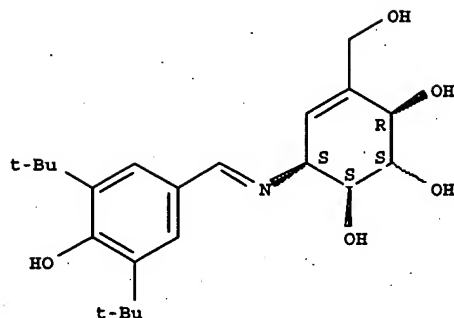
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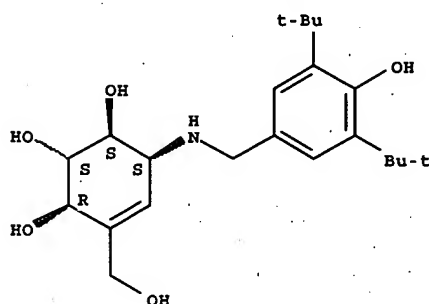
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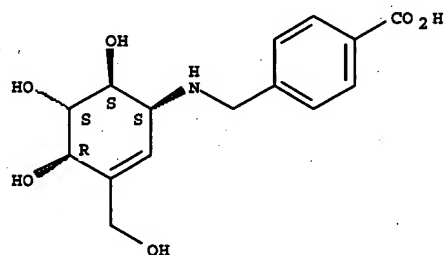
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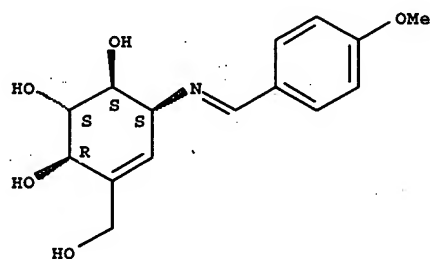
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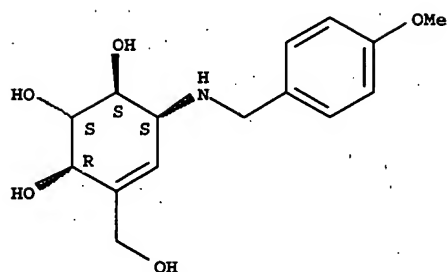
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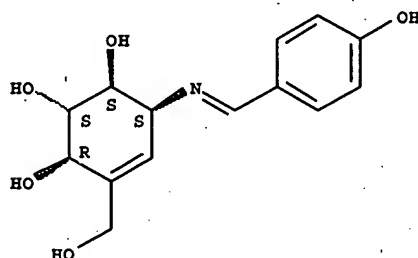


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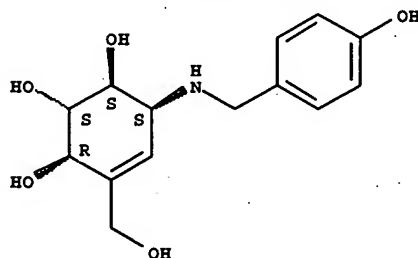
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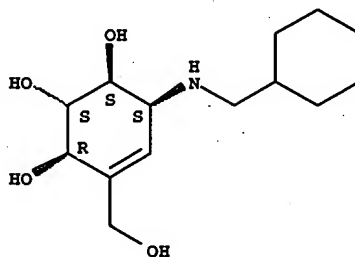
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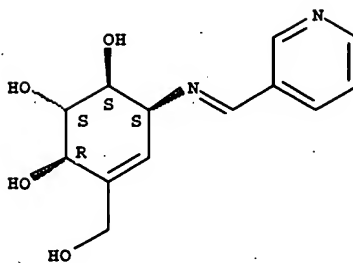
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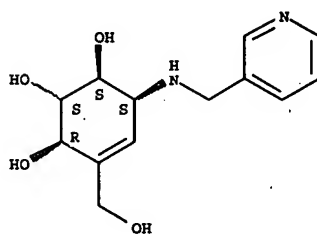
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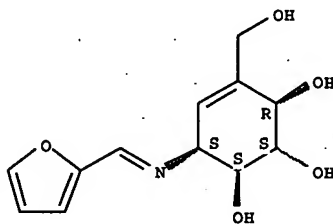
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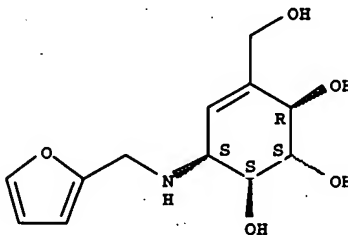
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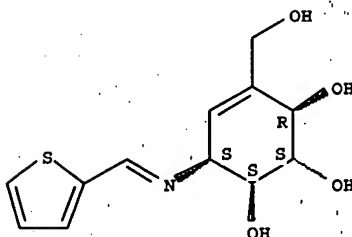
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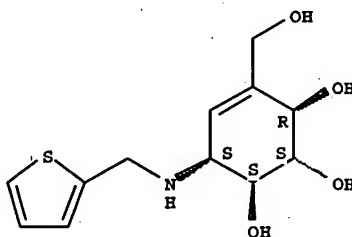
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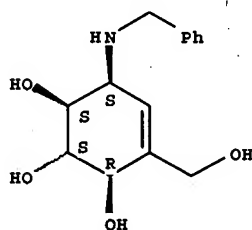
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RN-82920-06-7



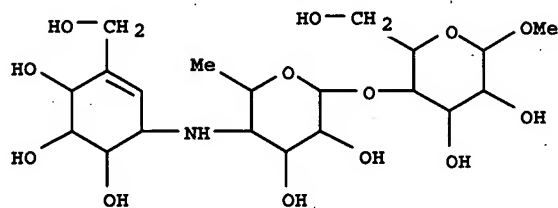
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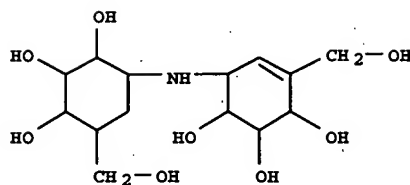
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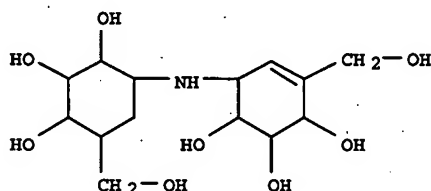
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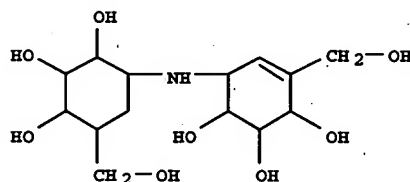
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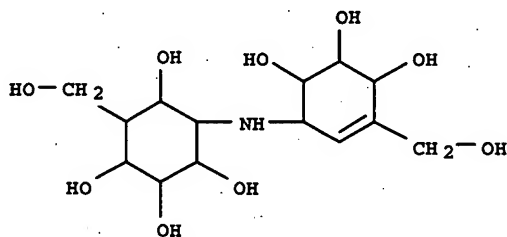
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Chemistry Letters (1982), (5), 749-52 p751

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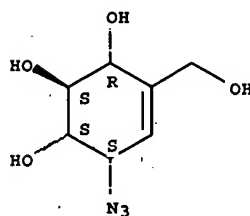
Ogawa, Seiichiro; Ogawa, Takao; Chida, Noritaka; Toyokuni, Tatsushi; Suami, Tetsuo.  
Chemistry Letters (1982), (5), 749-52 p751

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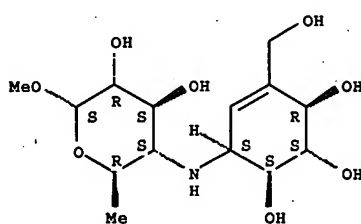
Ogawa, Seiichiro; Toyokuni, Tatsushi; Iwasawa, Yoshikazu; Abe, Yasuo; Suami, Tetsuo.  
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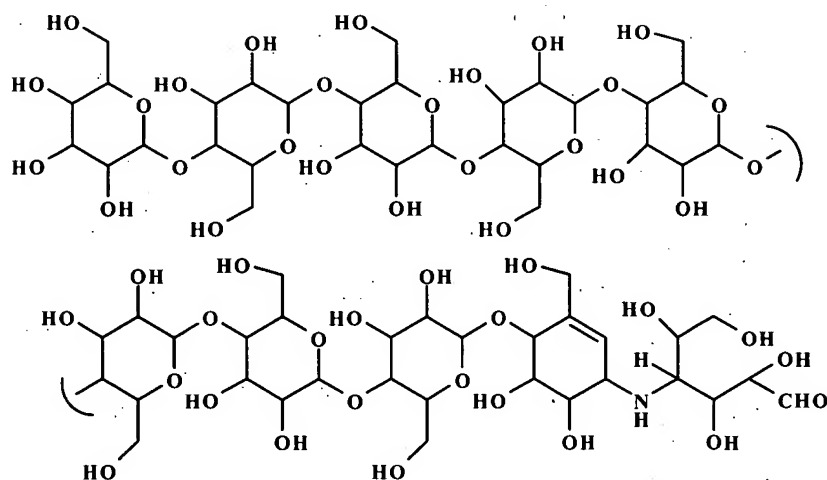
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Chemistry Letters (1982), (3), 279-82 p280

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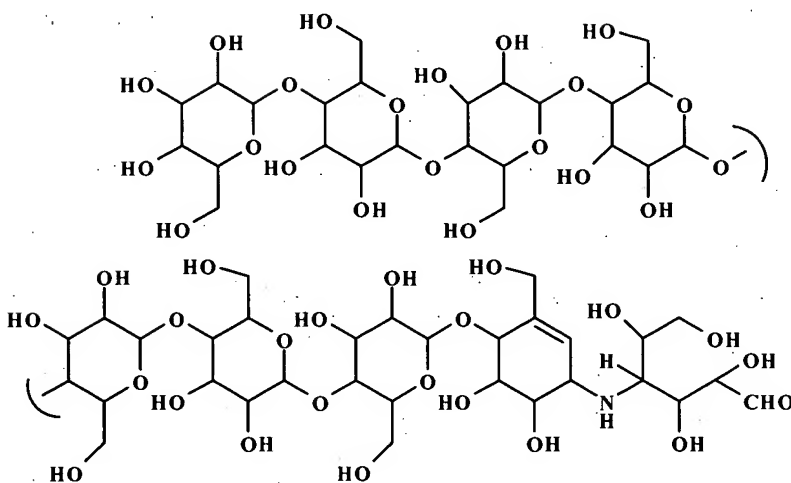
Meiji Seika Kaisha, Ltd., Japan JP-57024397-A2 p1

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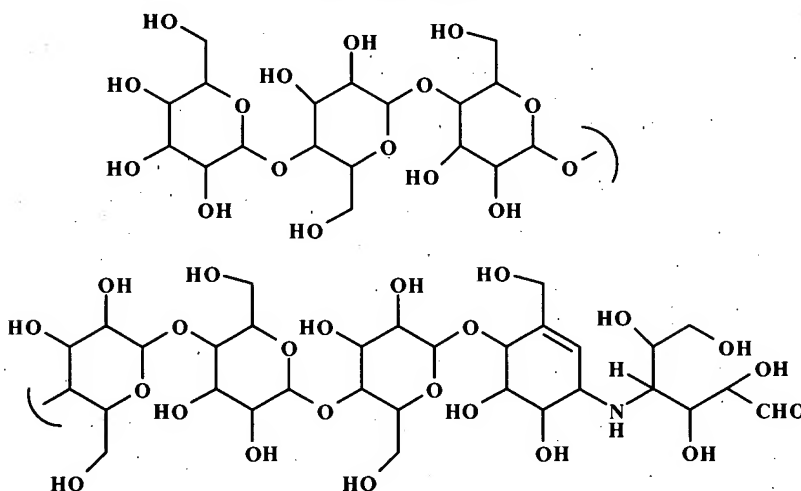
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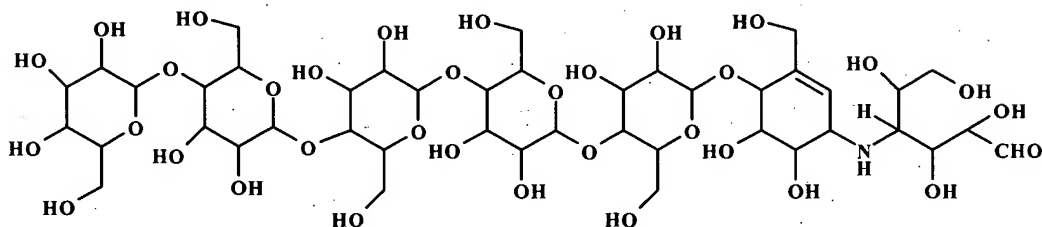
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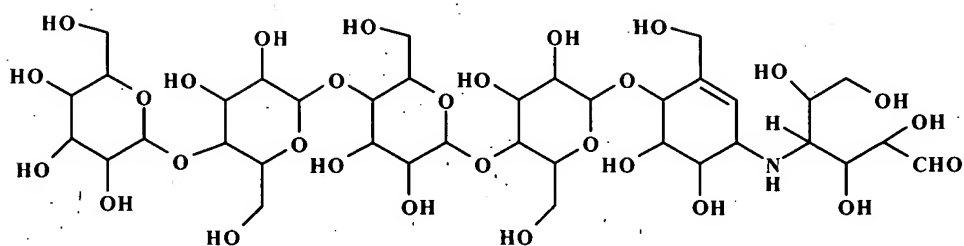
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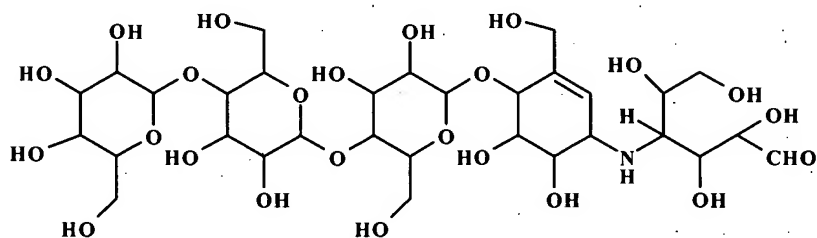
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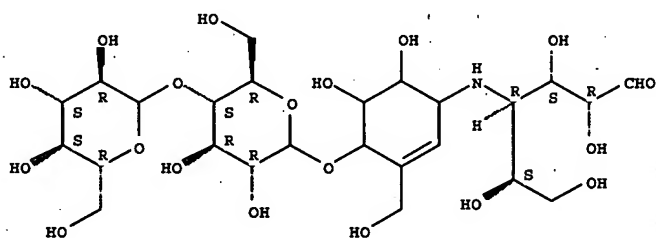
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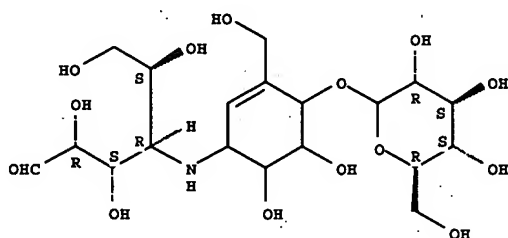
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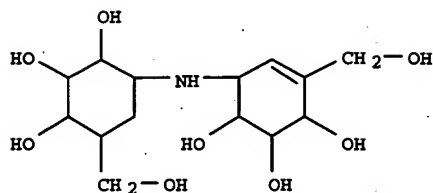
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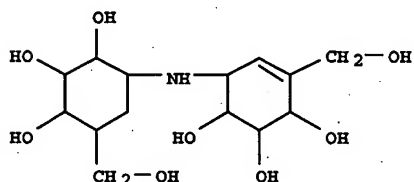
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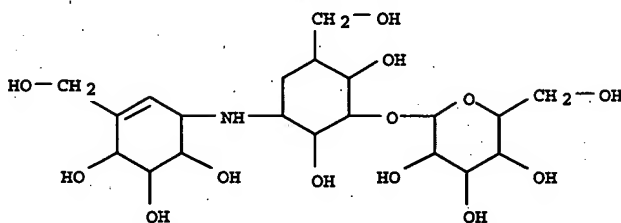
Ogawa, Seiichiro; Toyokuni, Tatsushi; Suami, Tetsuo. Chemistry Letters (1981), (7), 947-50.

RN-79549-82-9



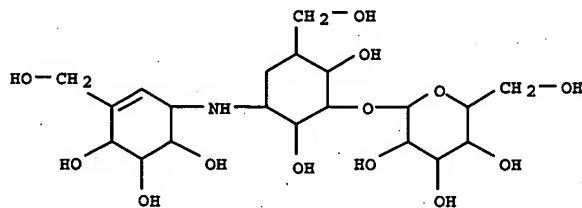
Ogawa, Seiichiro; Toyokuni, Tatsushi; Suami, Tetsuo. Chemistry Letters (1981), (7), 947-50.

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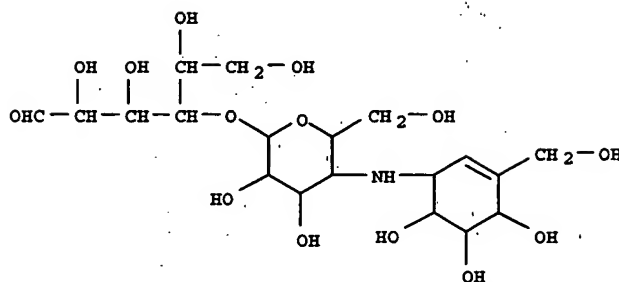
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Asano, Naoki; Kameda, Yukihiro; Matsui, Katsuhiko. Journal of Antibiotics (1991), 44(12), 1406-16 compound 3a p1407

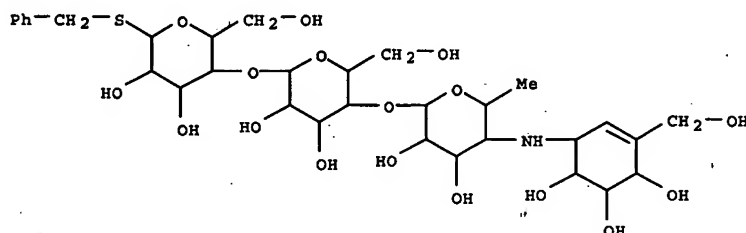


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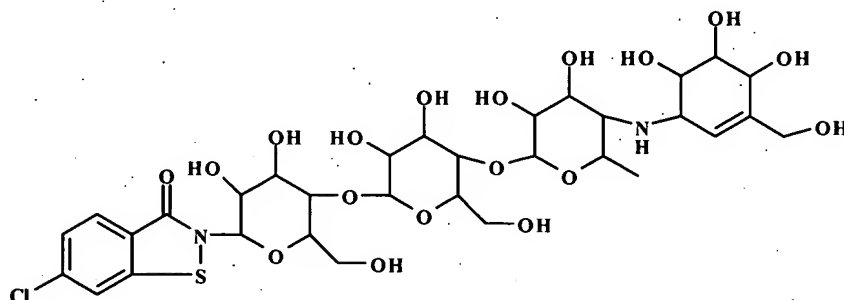
Mueller, L.; Junge, B.; Frommer, W.; Schmidt, D.; Truscheit, E. Inst. Biochem., Bayer A.-G., Wuppertal, Fed. Rep. Ger. Editor(s): Brodbeck, Urs. Enzyme Inhibitors, Proc. Meet. (1980), 109-22. Publisher: Verlag Chem p117

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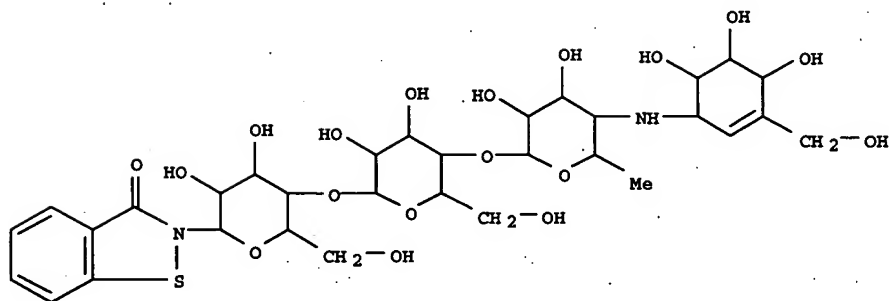
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RN-77468-93-0



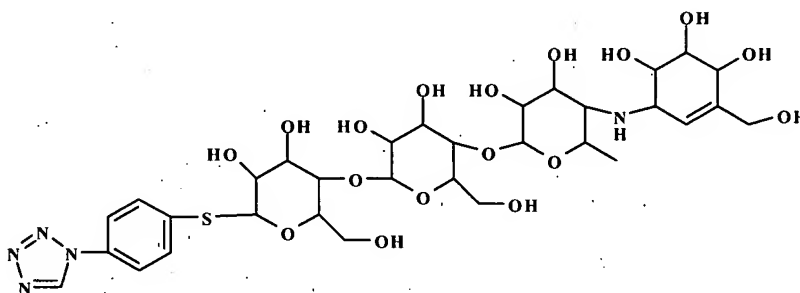
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RN-77453-33-9



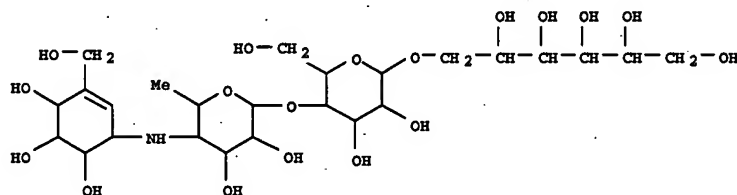
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RN-77453-32-8



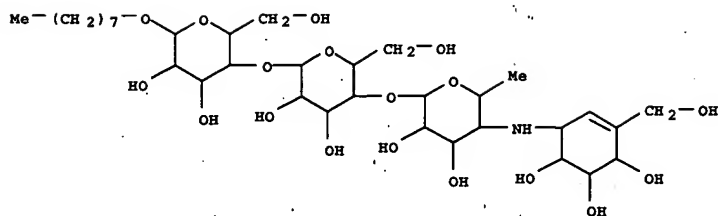
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RN-77453-31-7



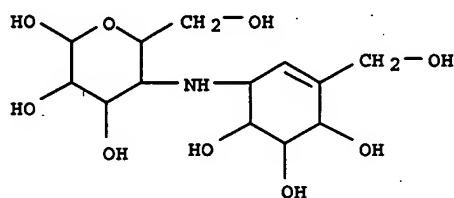
Junge, B.; Boeshagen, H.; Stoltefuss, J.; Mueller, L. Inst. Biochem., Bayer A.-G., Wuppertal, Fed. Rep. Ger. Editor(s): Brodbeck, Urs. Enzyme Inhibitors, Proc. Meet. (1980), 123-37. Publisher: Verlag Chem

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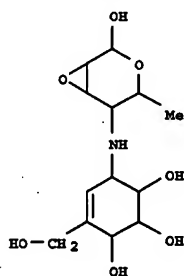
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RN-77369-20-1



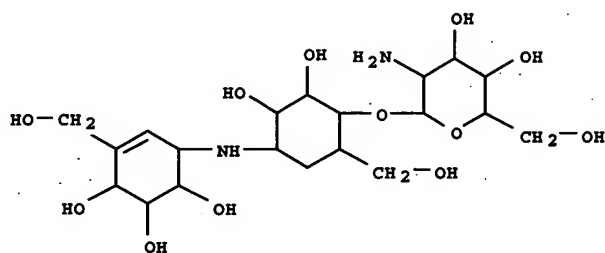
Mueller, L.; Junge, B.; Frommer, W.; Schmidt, D.; Truscheit, E. Inst. Biochem., Bayer A.-G., Wuppertal, Fed. Rep. Ger. Editor(s): Brodbeck, Urs. Enzyme Inhibitors, Proc. Meet. (1980), 109-22. Publisher: Verlag Chem

RN-77181-46-5

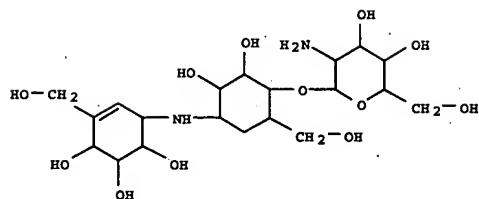


Ajinomoto Co., Inc., Japan. JP-55157595

RN-77161-98-9

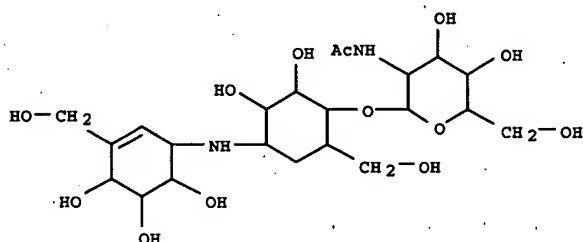


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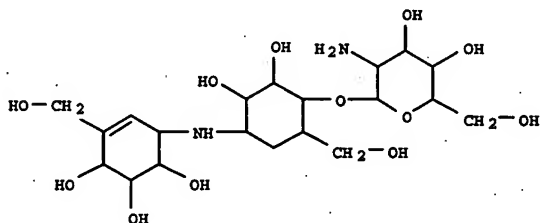


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RN-73495-51-9



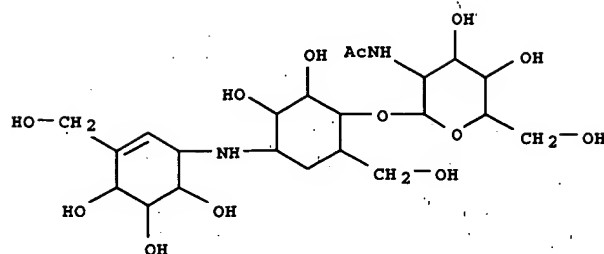
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HCl

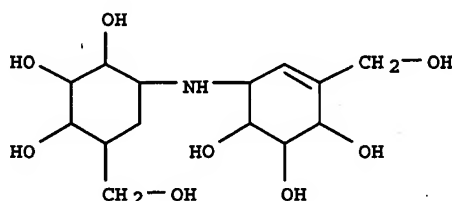
78

RN-73469-81-5



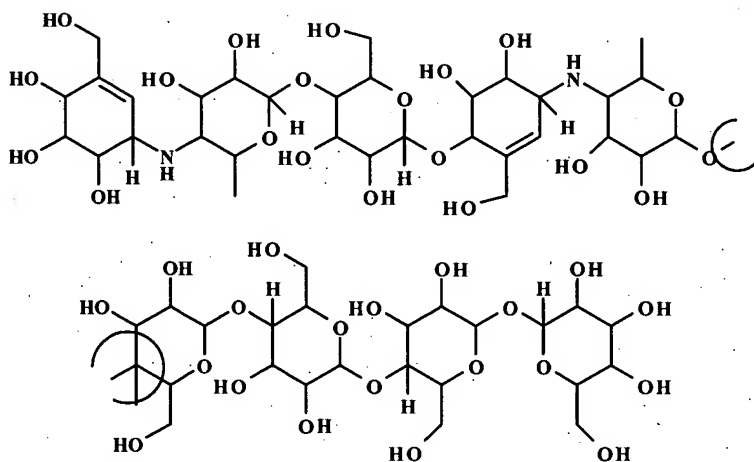
Hasegawa, Akira; Kobayashi, Toshiyuki; Hibino, Hideyuki; Kiso, Makoto. Dep. Agric. Chem., Gifu Univ., Gifu, Japan. Agricultural and Biological Chemistry (1980), 44(1), 143-7 p144

RN-73395-43-4



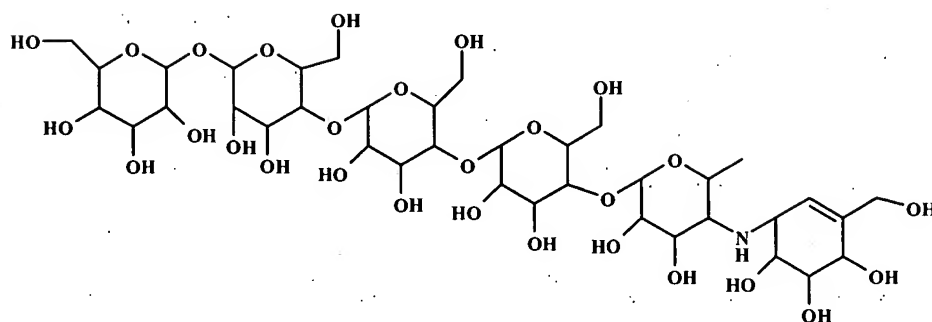
Kameda, Yukihiro. Takeda Chemical Industries, Ltd., Japan JP-55000308

RN-71884-70-3



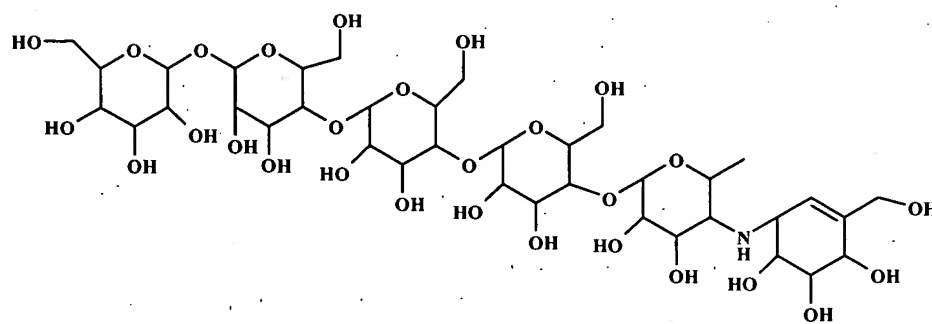
Y.Suhara et. al. US-4273765

RN-71869-92-6



Y.Suhara et. al. US-4273765

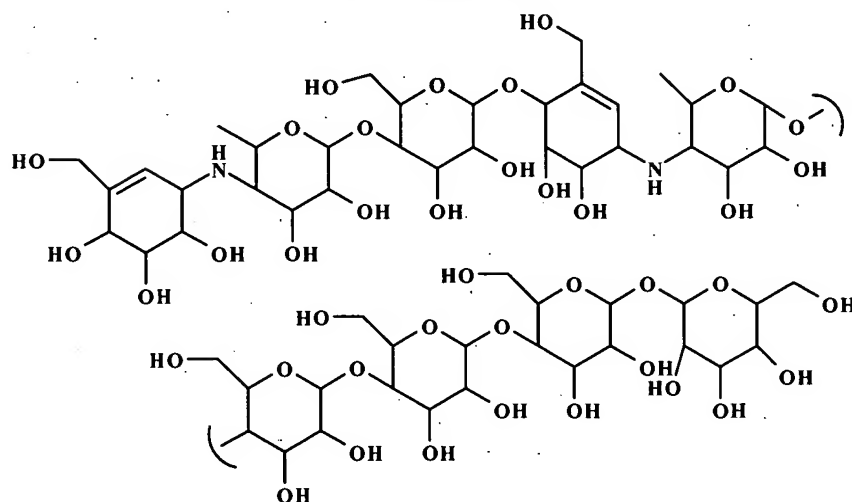
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HCl salt

Y.Suhara et. al. US-4,273,765

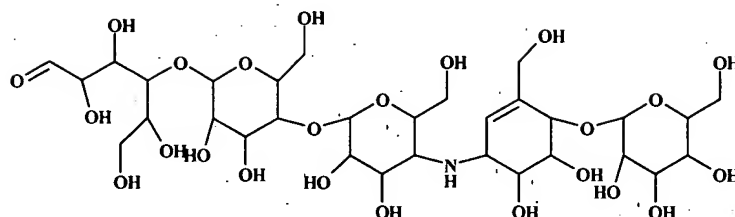
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HCl salt

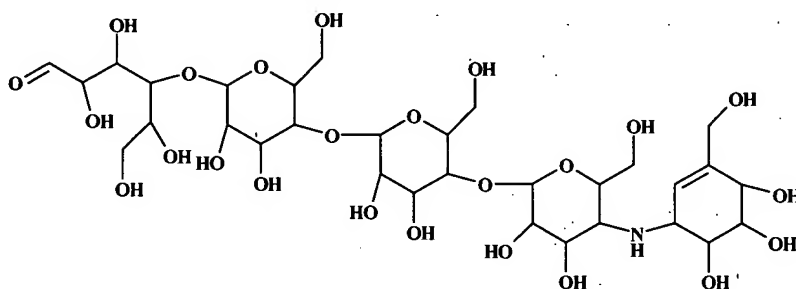
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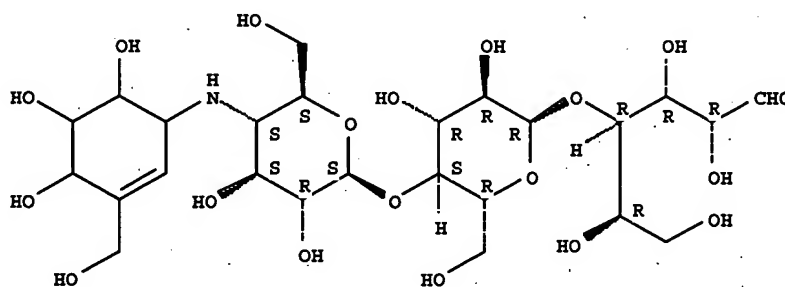
Otani, Masaru; Saito, Tetsu; Satoi, Shuzo; Mizoguchi, Junzo; Muto, Naoki. Toyo Jozo Co., Ltd., Japan DE-2855409

RN-71605-24-8



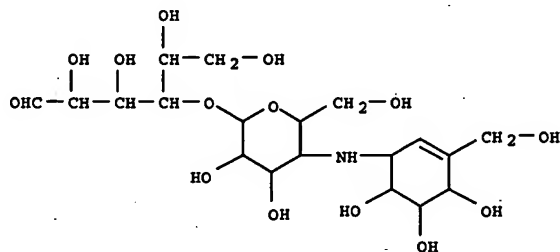
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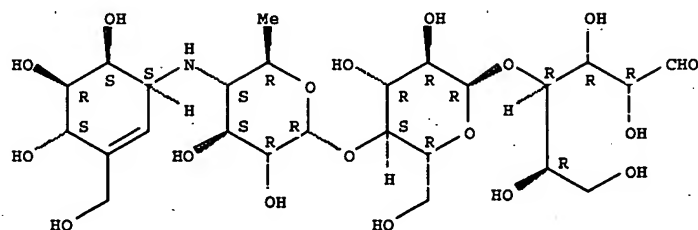
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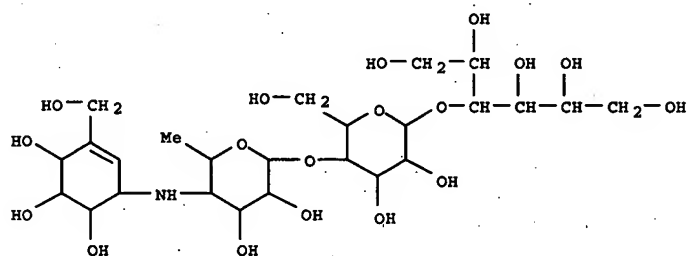
Otani, Masaru; Saito, Tetsu; Satoi, Shuzo; Mizoguchi, Junzo; Muto, Naoki. Toyo Jozo Co.,  
Ltd., Japan DE-2855409

RN-69351-49-1



E. Rauenbusch et. al. US-4174439

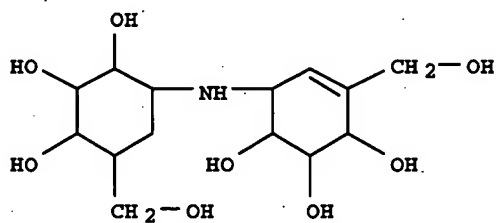
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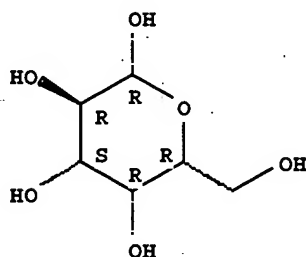
B. Junge et. al. DE-2658562 p65

RN-68422-39-9

Component Number 1



Component Number 2

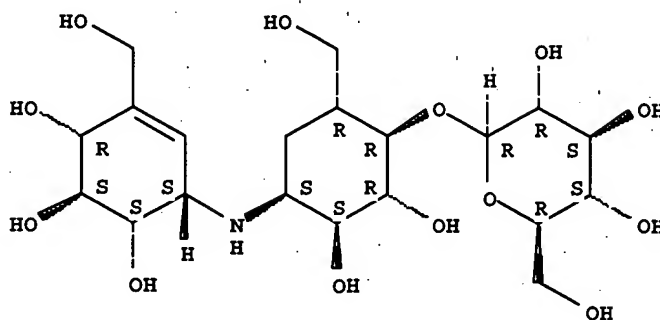




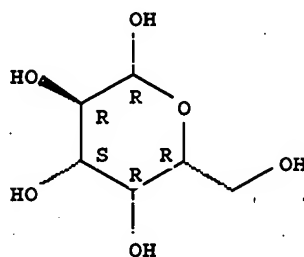
Kameda, Yukihiro; Asano, Naoki; Hashimoto, Tadashi. Journal of Antibiotics (1978),  
31(9), 936-8. p 936

RN-68422-38-8

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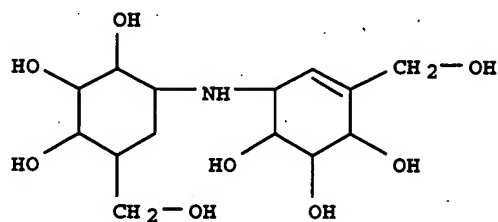
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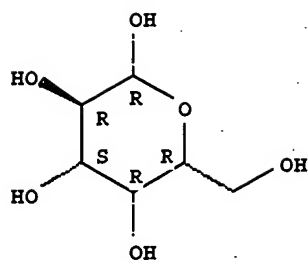
Kameda, Yukihiro; Asano, Naoki; Hashimoto, Tadashi. Journal of Antibiotics (1978),  
31(9), 936-8. p936

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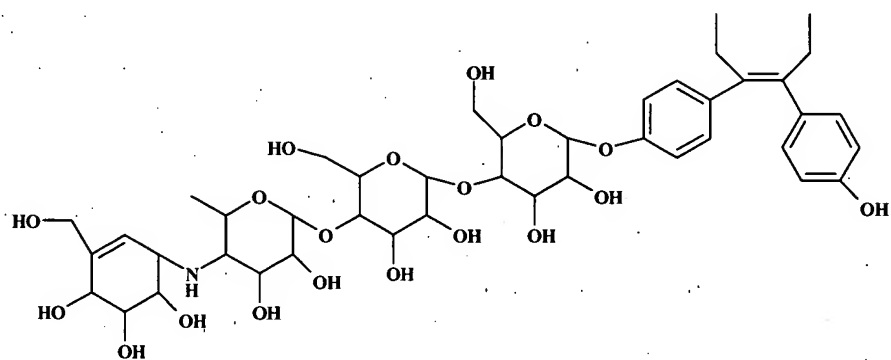


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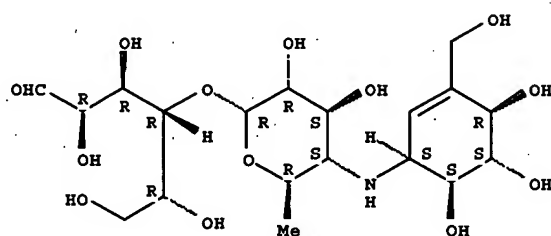
Kameda, Yukihiro; Asano, Naoki; Hashimoto, Tadashi. Journal of Antibiotics (1978), 31(9), 936-8, p937

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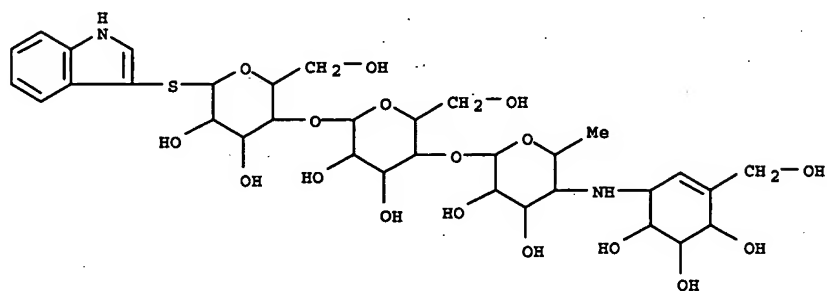
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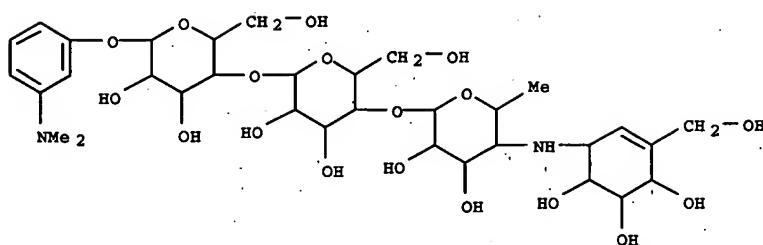
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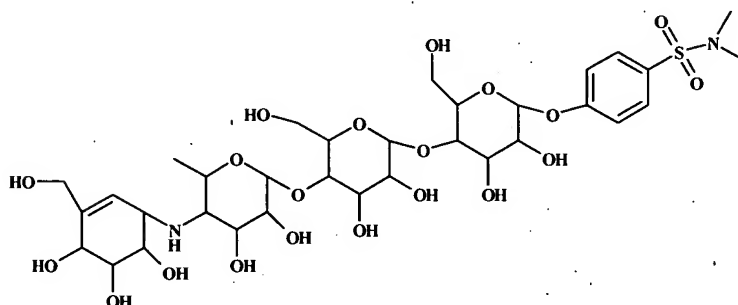
B. Junge et. al. DE-2658562

RN-68111-96-6



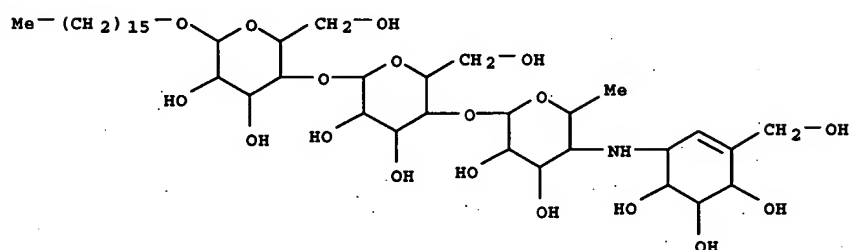
B. Junge et. al. DE-2658562 p69

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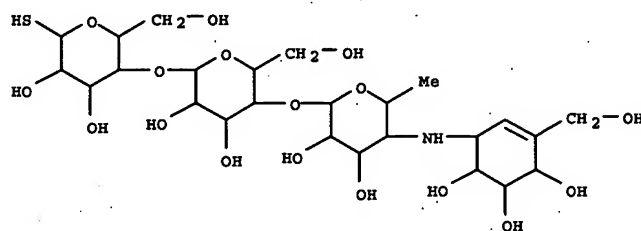
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RN-68107-64-2



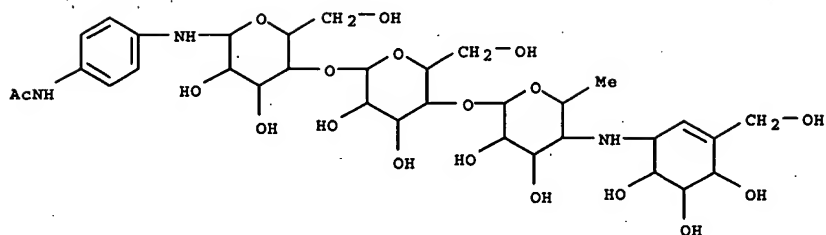
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RN-68107-62-0



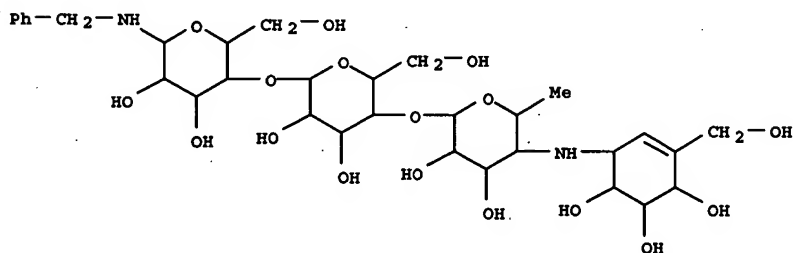
B. Junge et. al. DE-2658562 p31

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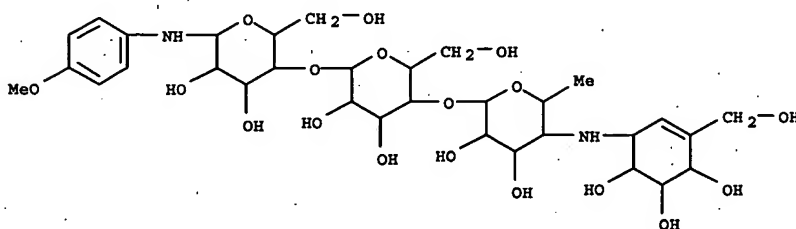
B. Junge et. al. DE-2658562

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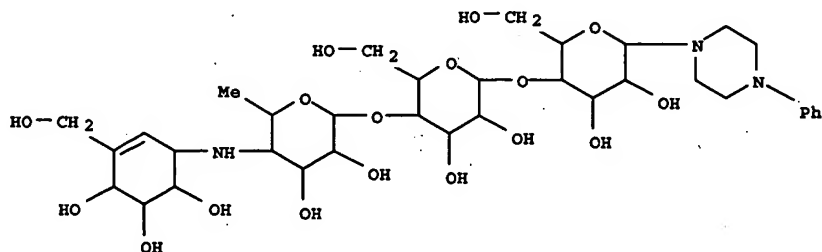
B. Junge et. al. DE-2658562 p73

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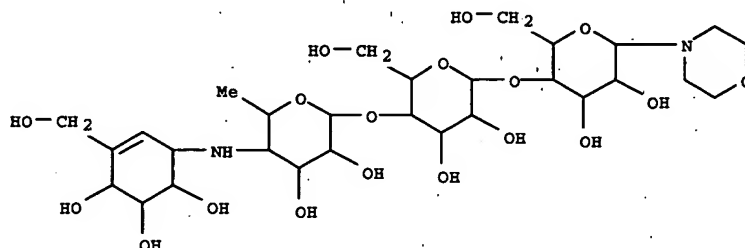
Junge, B.; Boeshagen, H.; Stoltefuss, J.; Mueller, L. Inst. Biochem., Bayer A.-G.,  
Wuppertal, Fed. Rep. Ger. Editor(s): Brodbeck, Urs. Enzyme Inhibitors, Proc. Meet.  
(1980), 123-37. Publisher: Verlag Chem. Diagram 16 p 136

RN-68107-54-0



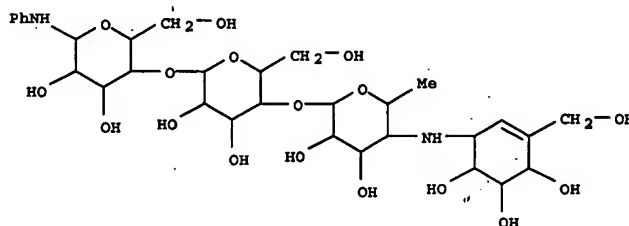
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RN-68107-52-8



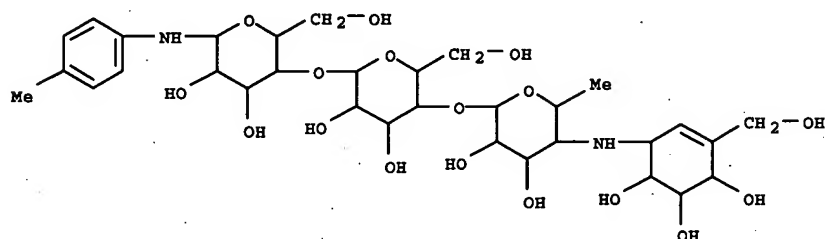
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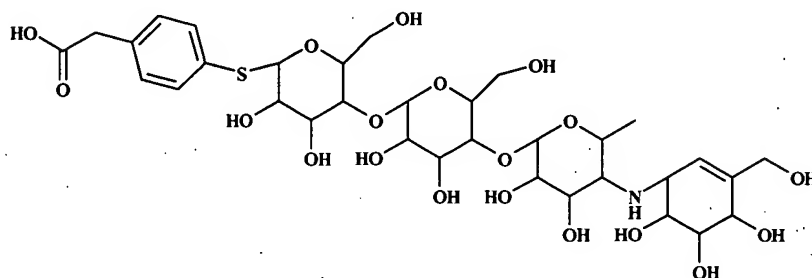
B. Junge et. al. DE-2658562 p73

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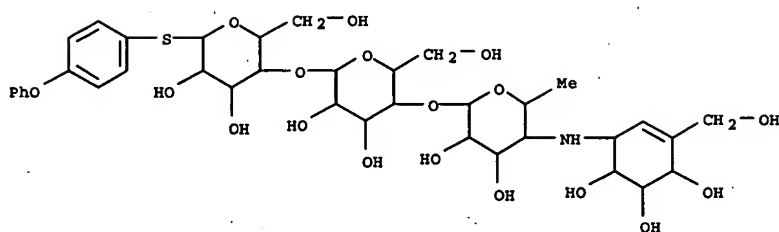
B. Junge et. al. DE-2658562 p72

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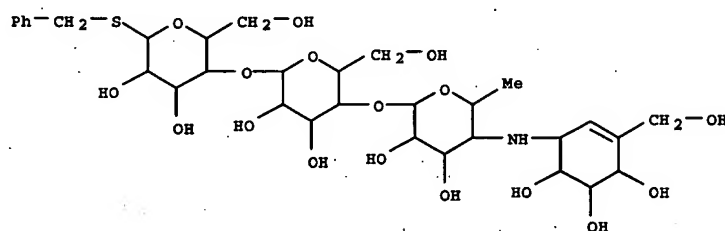
B. Junge et. al. DE-2658562

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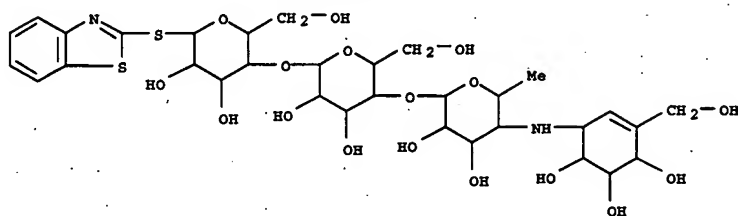
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RN-68107-42-6



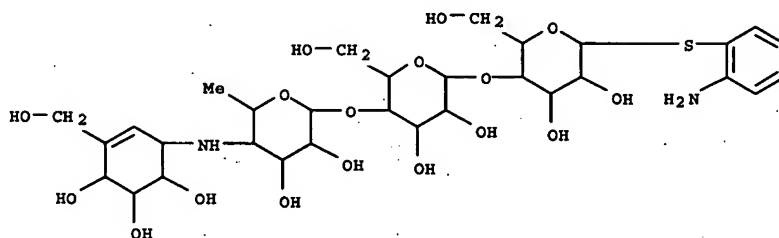
B. Junge et. al. DE-2658562 p72

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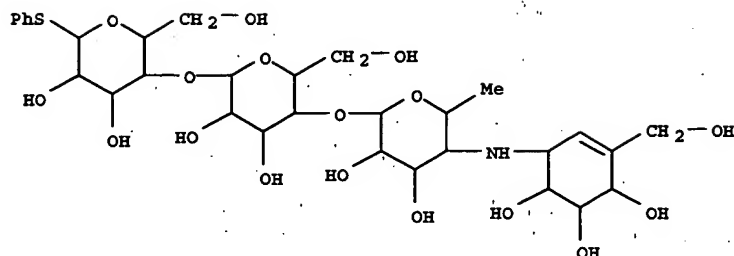
B. Junge et. al. DE-2658562 p71

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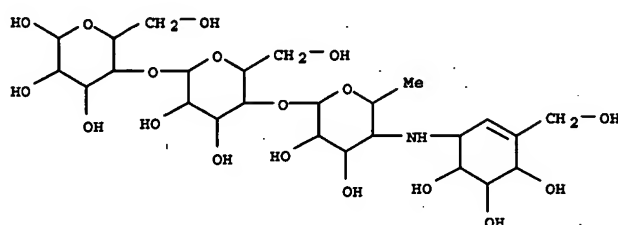
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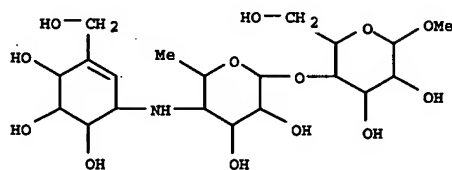
B. Junge et. al. DE-2658562 p70

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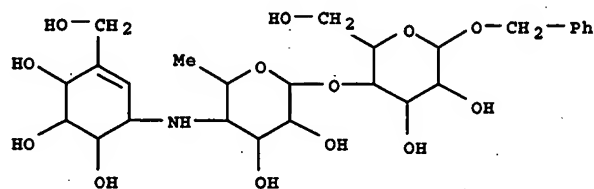
Junge, B.; Boeshagen, H.; Stoltefuss, J.; Mueller, L. Inst. Biochem., Bayer A.-G.,  
Wuppertal, Fed. Rep. Ger. Editor(s): Brodbeck, Urs. Enzyme Inhibitors, Proc. Meet.  
(1980), 123-37. Publisher: Verlag Chem. P127

RN-68107-32-4



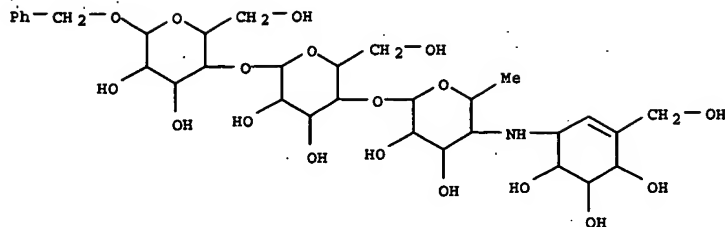
B. Junge et. al. DE-2658562 p63

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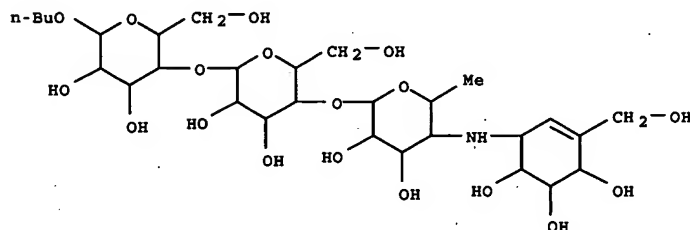
B. Junge et. al. DE-2658562 p63

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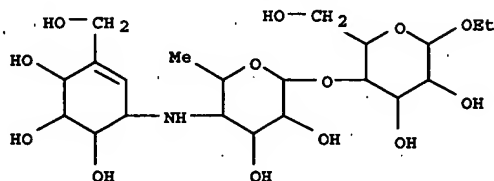
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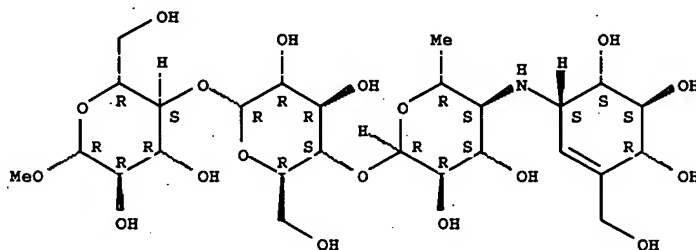
B. Junge et. al. DE-2658562 p61

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B. Junge et. al. DE-2658562 p61

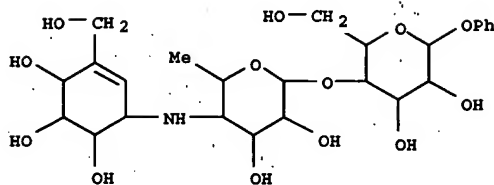
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B. Junge et. al. DE-2658562 p59

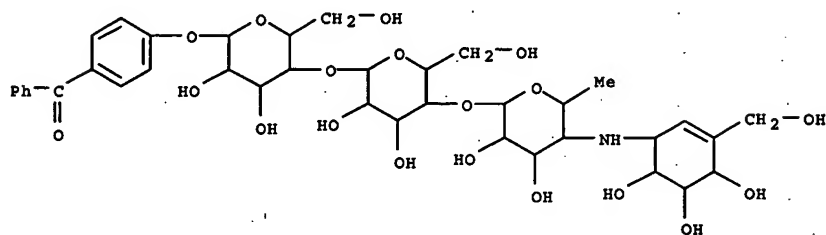


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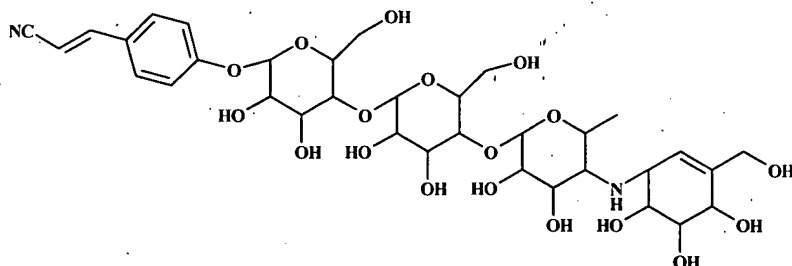
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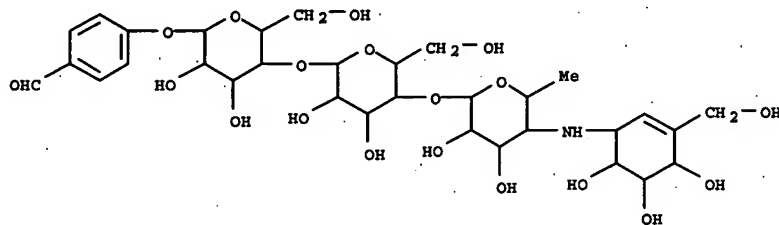
B. Junge et. al. DE-2658562 p70

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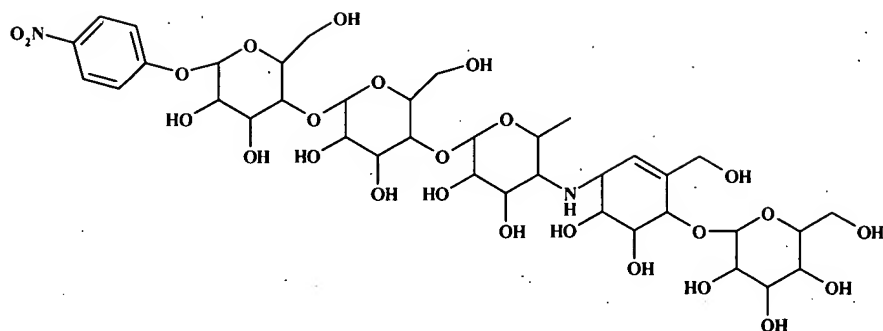
Junge, B.; Boeshagen, H.; Stoltefuss, J.; Mueller, L. Inst. Biochem., Bayer A.-G., Wuppertal, Fed. Rep. Ger. Editor(s): Brodbeck, Urs. Enzyme Inhibitors, Proc. Meet. (1980), 123-37. Publisher: Verlag Chem. Diagram 14 p 135

RN-68095-89-6



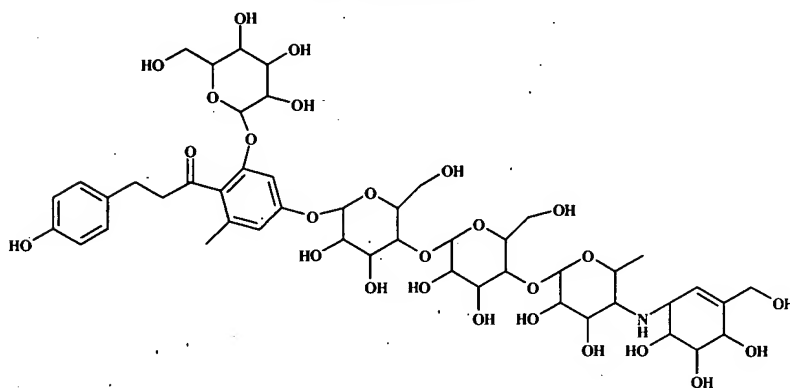
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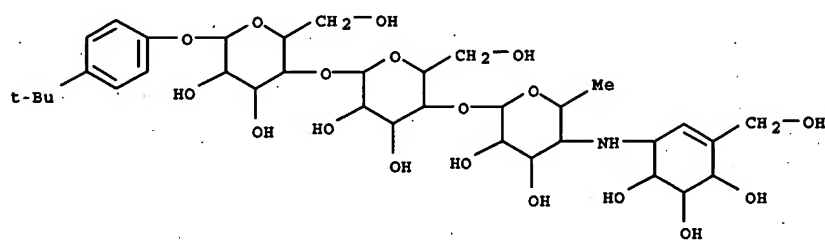
B. Junge et. al. DE-2658562 p53

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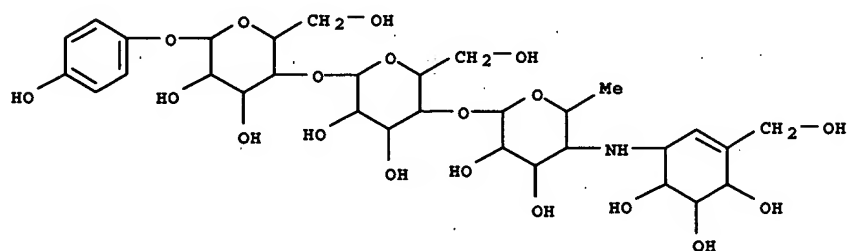
B. Junge et. al. DE-2658562 p57

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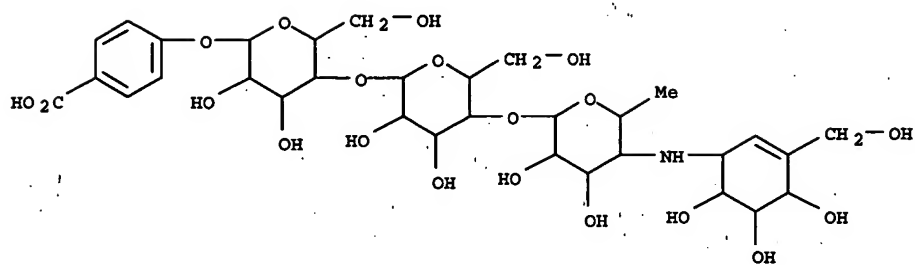
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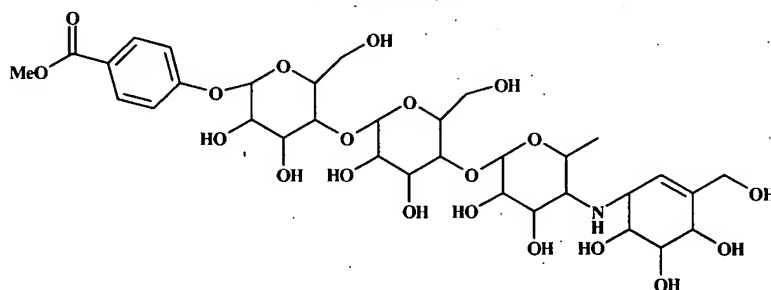
B. Junge et. al. DE-2658562 p56

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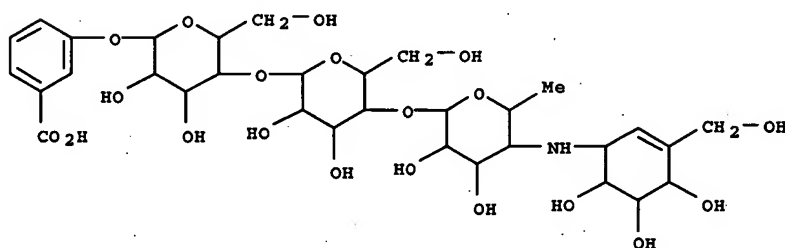
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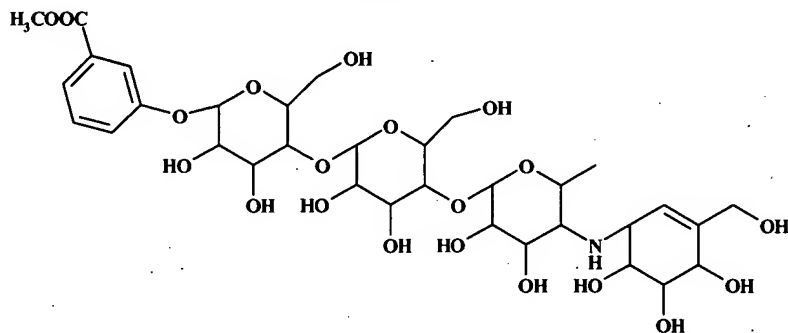
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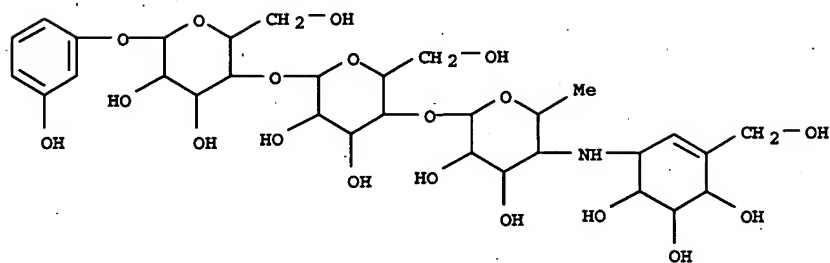
B. Junge et. al. DE-2658562 p55

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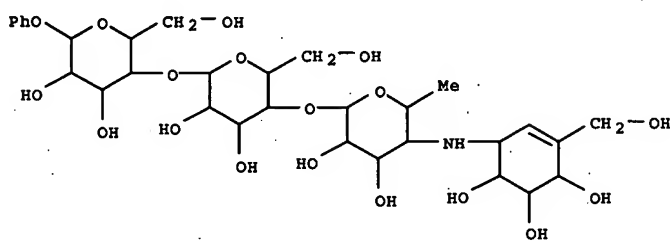
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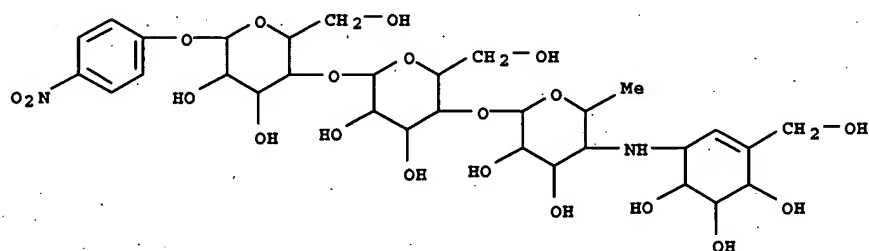
B. Junge et. al. DE-2658562 p54

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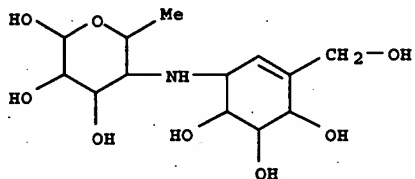
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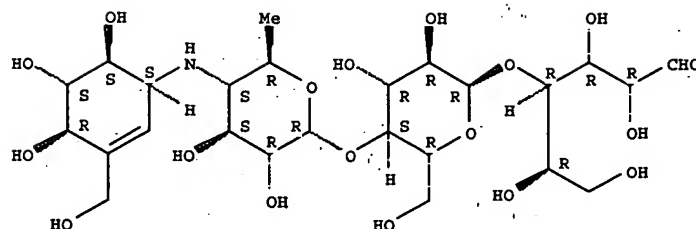


B. Junge et. al. DE-2658562 p53

RN-57511-55-4

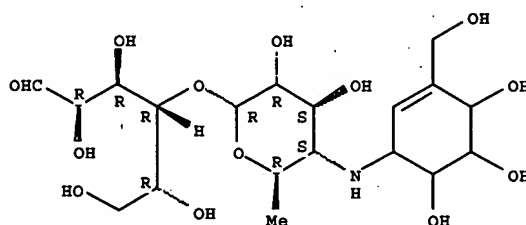


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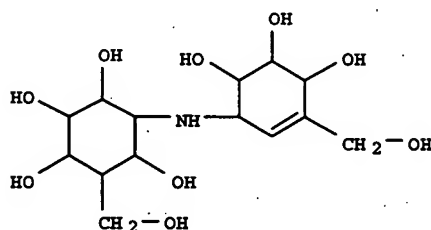
Frommer, Werner; Junge, Bodo; Keup, Uwe; Mueller, Lutz; Puls, Walter; Schmidt, Delf. US-4062950 example 14

RN-56180-93-9



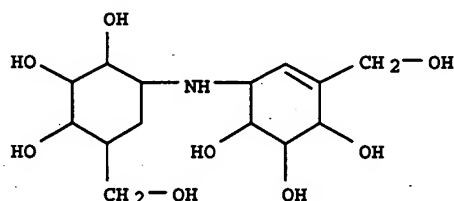
Frommer, Werner; Junge, Bodo; Keup, Uwe; Mueller, Lutz; Puls, Walter; Schmidt, US-4062950 example 15

RN-39318-73-5



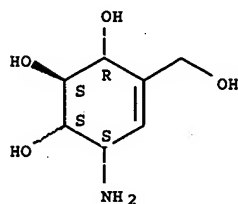
Asano N; Takeuchi M; Kameda Y; Matsui K; Kono Y JOURNAL OF ANTIBIOTICS (1990 Jun), 43(6), 722-6 p723

RN-38665-10-0



Asano N; Takeuchi M; Kameda Y; Matsui K; Kono Y JOURNAL OF ANTIBIOTICS (1990 Jun), 43(6), 722-6 p723

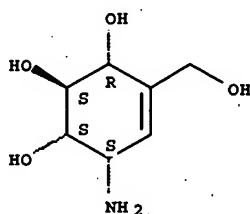
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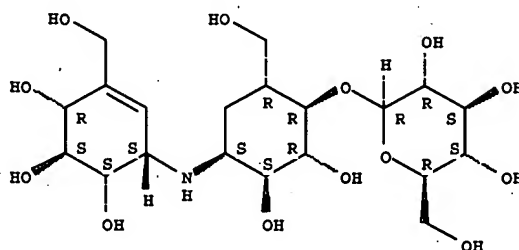
Kameda, Yukihiro; Horii, Satoshi. Journal of the Chemical Society, Chemical Communications (1972), (12), 746-7 p746

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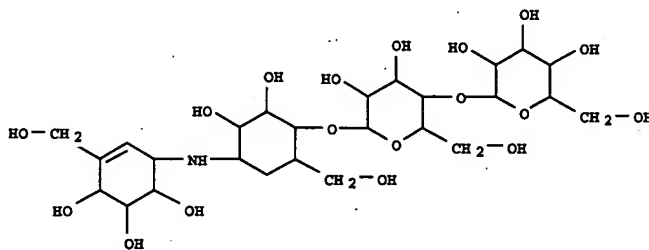
Chen, Xiaolong; Fan, Yongxian; Zheng, Yuguo; Shen, Yinchu. Chemical Reviews (Washington, DC, United States) (2003), 103(5), 1955-1977

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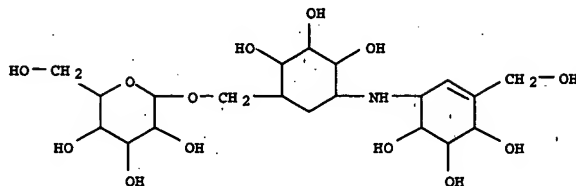
Horii, Satoshi; Kameda, Yukihiro. Journal of the Chemical Society, Chemical Communications (1972), (12), 747-8.

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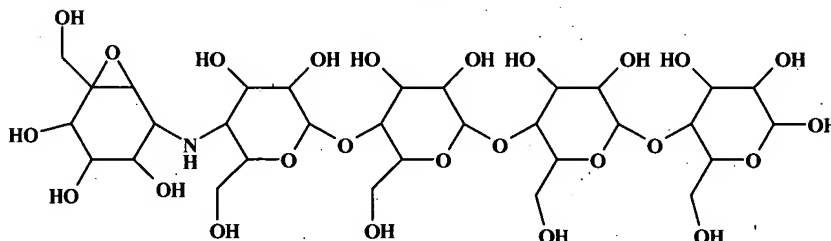
Horii, Satoshi; Kameda, Yukihiro; Kawahara, Kunio. Journal of Antibiotics (1972), 25(1), 48-53 p51

RN-12650-67-8



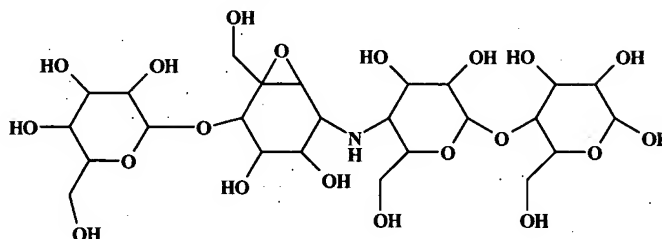
Horii, Satoshi; Kameda, Yukihiro; Kawahara, Kunio. Journal of Antibiotics (1972), 25(1), 48-53 p51

RN-180962-56-5



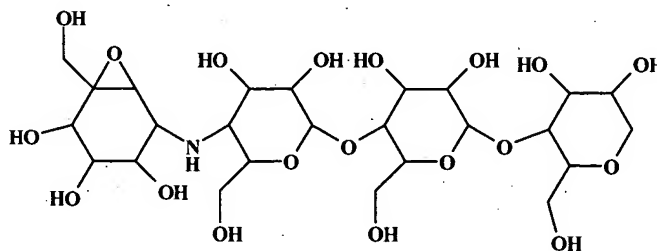
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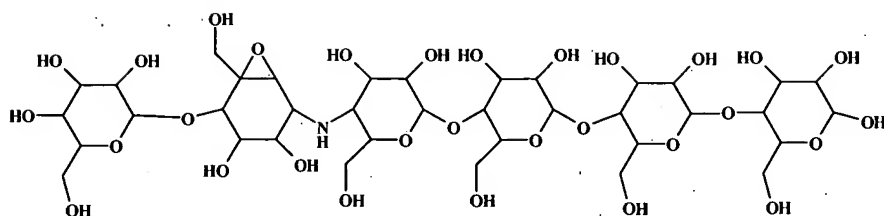
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RN-180962-54-3



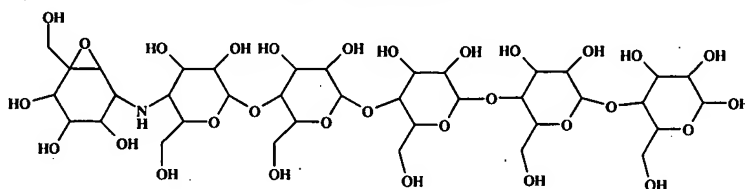
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RN-180962-53-2



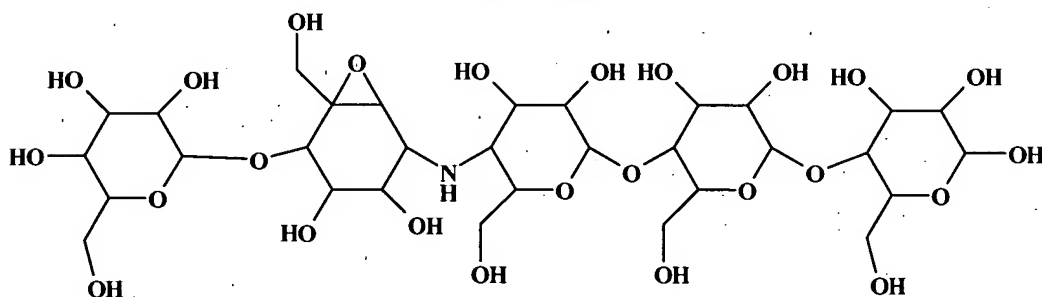
Kim, Jung Woo; Lee, Kwang Moo; Chun, Hyoung Sik; Kim, Jong Gwan; Chang, Hung Bae;  
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RN-180962-52-1



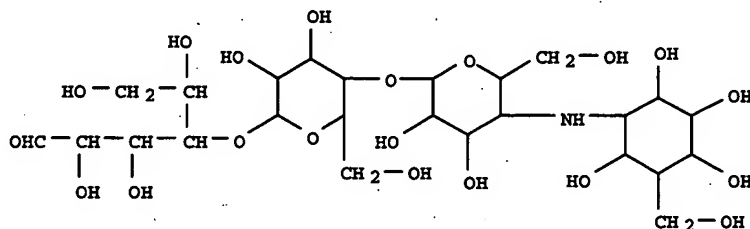
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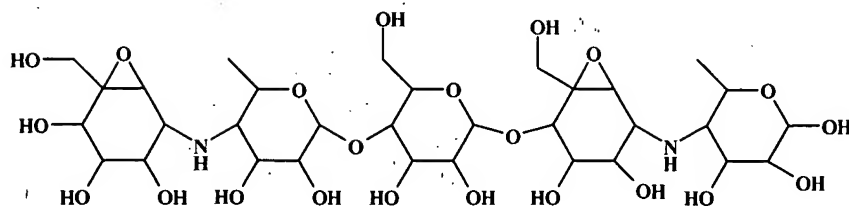
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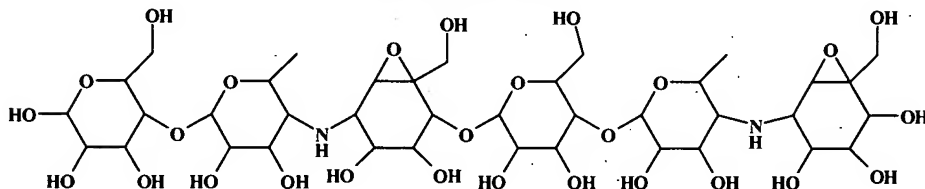


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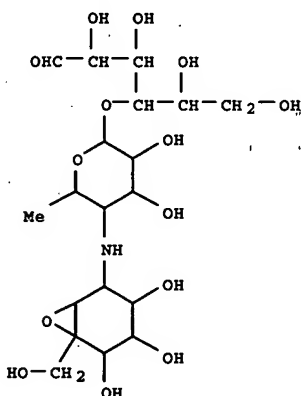
Vertesy, Laszlo; Betz, Joachim; Fehlhaber, Hans Wolfram; Geisen, Karl. EP-257418-A2

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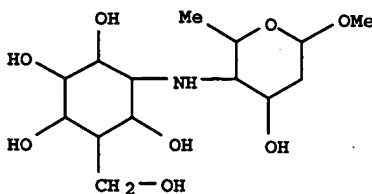
Vertesy, Laszlo; Betz, Joachim; Fehlhaber, Hans Wolfram; Geisen, Karl. EP-257418-A2

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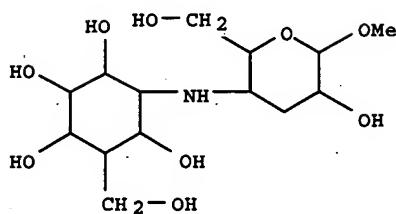
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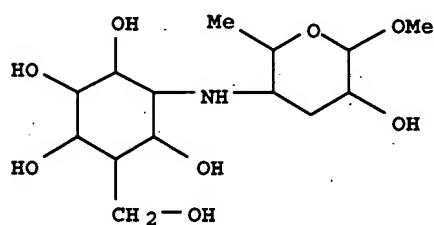
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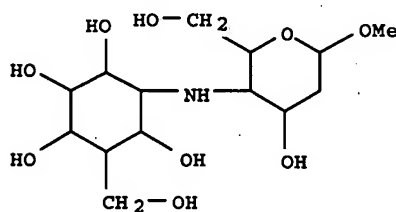
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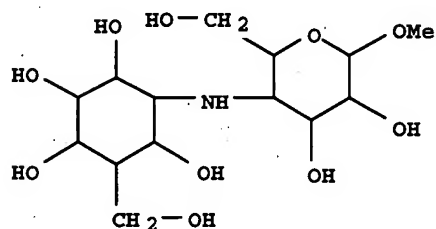
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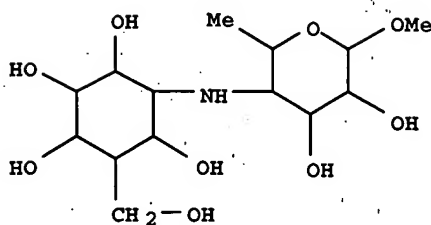
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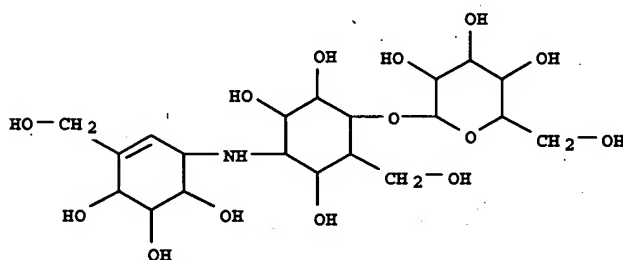
Shibata, Yasushi; Kosuge, Yasuhiro; Ogawa, Seiichiro. Carbohydrate Research (1990), 199(1), 37-54 p38

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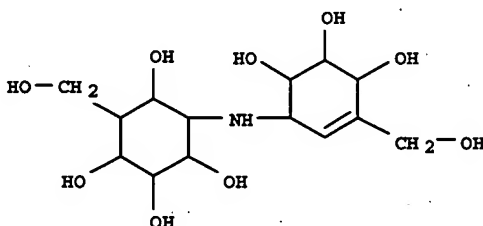
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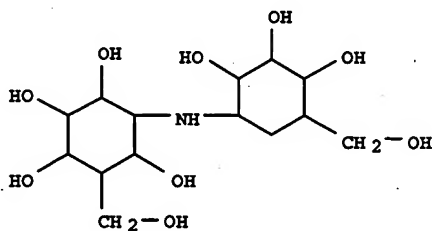
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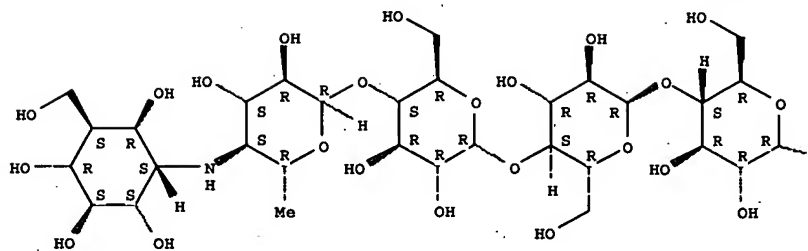
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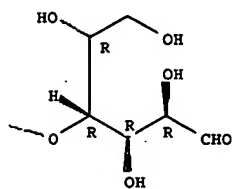
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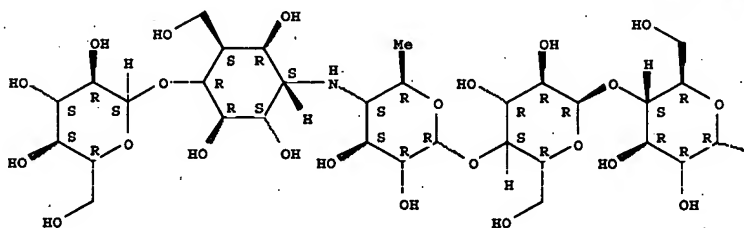
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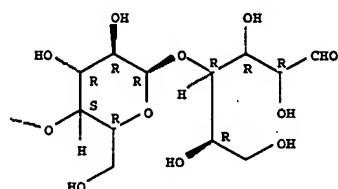
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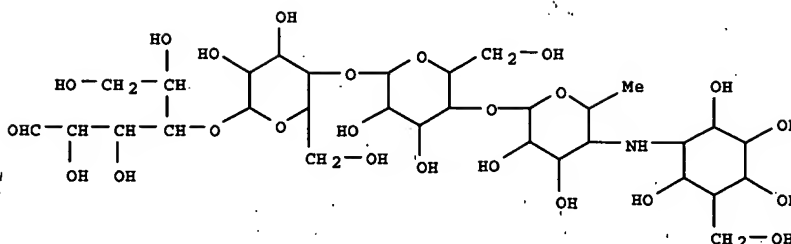


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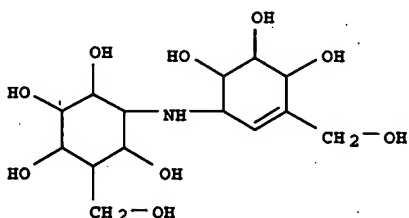
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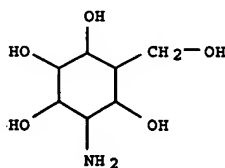
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By "acarbose and the higher homologues thereof" is meant the amylostains of the formula given below, and mentioned generically and specifically in British Patent No. GB 1,482,543; U.S. Patnet 4,175,123; and in *Agric. Biol. Chem.*, 46 (7), 1941-1945, 1982, al of which are hereby incorporated by reference in their entirety.